




OBSERVATORI BARCELONA

Presentation

If we were to look back at where we were a year ago, we would probably be quite surprised at the great changes that have taken place in our lives in just twelve months.

The emergence of COVID-19 is probably the first phenomenon in modern history to have had a simultaneous impact on humankind as a whole, and the consequences are clearly visible all over the world, affecting almost every aspect of life, such as the economy, health, sustainability, innovation, and in a broader sense, the quality of life itself.

The pandemic and the health crisis have led to a complete paradigm shift with respect to the scenario envisaged a year ago. During 2020, although initial forecasts predicted growth, economic activity came to a standstill in many sectors, creating difficulties for many businesses, freelancers, companies, and commercial establishments, as well as for a significant number of working people.

In these extraordinary times, we are pleased to present the Barcelona Observatory's 18th annual report, which provides an overview of the position of Barcelona and its metropolitan area with respect to other cities and metropolises in the world. This publication is the result of a collaboration between Barcelona City Council and the Official Chamber of Commerce, Industry, Services and Shipping. It encompasses a variety of indicators for 2019 and 2020, and therefore partially reflects the effects of COVID-19.

One of the report's most noteworthy conclusions is that Barcelona remains a dynamic, powerful, and resilient city, and one that conveys security, as is shown by the good results in most of the indicators included.

A cross-sectional view reveals that, in spite of the global crisis, Barcelona continues to enjoy a promi-



nent economic position at international level. For example, it is significant that, according to the prestigious *Global Power City Index*, during 2020 it retained its place among the 25 most competitive cities in the world for the fifth consecutive year, and that it is still considered an attractive environment for investment.

The city's development over recent years as a centre of technological and digital enterprise – one of its major strengths – has not been affected by the pandemic. In fact, it has become further consolidated: we are now the 8th most important tech city in Europe (*Tech Cities of the Future*), as well as the 5th largest start-up hub in Europe (*EU-Startups*).

In recent years, Barcelona has committed to the generation, attraction, retention, and promotion of talent as one of the driving forces that are to guide economic recovery, developing its own strategy that is now paying off, as shown by our position as the 5th most appealing city for working overseas for digital experts (*Decoding Global Talent*).

Barcelona's cultural and creative tradition should also be highlighted: we are the 9th most important city in Europe in terms of creative intensity according to *The Cultural and Creative Cities Monitor*, with particularly good results in the fields of human capital, training, and employment in creative and knowledge-intensive activities.

The perception of Barcelona as a city that is appealing for both visitors and entrepreneurs also remains very positive (we are 8th in the world, according to *Resonance Consulting*). This is something we must take advantage of in order to spur economic growth and international investment, as well as to attract visitors once again and to relaunch tourism through culture and a visitor economy model based above all on quality.

These are just a few examples that show that Barcelona's social and economic reality continues to inspire confidence during these uncertain times, and that we have the potential to become a leading city in a post-pandemic world. We have excellent educational institutions, both public and private – for example, the *Financial Times* mentions Barcelona as the only city with two business schools that feature on the list of the top-10 MBAs in Europe. We have a strong business ecosystem that we will be reinforcing over the next few years with the development of 1 million square metres in the 22@ technology district, and we exercise our leadership from one of the major metropolitan and urban areas in Europe, with a strategic location as a bridge between the two shores of the Mediterranean and with strong links to Latin America.

However, we are also very aware of the big challenges ahead, such as overcoming the pandemic, strengthening the healthcare system, generating quality employment, reducing inequalities, sustainable and inclusive growth, and digital transformation. These challenges could be summarised as a strong wish to continue building a city based on a threefold premise: greater competitiveness, greater sustainability, and greater equity.

In short, our aim is to facilitate and promote the revitalisation of the city in every sense, while pushing ahead with the transformation of its socio-economic model, and taking advantage of the opportunities provided by the Next Generation EU European funds. We see this task as one that is based on public-private co-responsibility, as a philosophy founded on the will to pool our efforts in order to achieve multiple results. We want to be able to count on economic and social agents whose participation is fundamental if we are to progress towards our goals in the medium and long term.

To achieve this, we need tools - such as this document - that enable us to ascertain and accurately assess the city's socio-economic development, and give us a better understanding of who we are and where we want to go. I would therefore like to congratulate the technical teams that have made the publication of this report possible, since I believe it is also a good example of the sort of collaboration between institutions that helps strengthen the great collective project that is Barcelona.

Jaume Collboni i Cuadrado

First Deputy Mayor

Area for Economy, Work, Competitiveness and Tax, Barcelona City Council

Presentation

I am pleased to present the 18th edition of the Barcelona Observatory, a publication resulting from the partnership between the Barcelona Chamber of Commerce and Barcelona City Council with the aim of ascertaining the city's position with respect to other top cities in the world. This annual mapping is carried out using 35 indicators grouped into six blocks: centre of economic activity, sustainability, quality of life and cohesion; job market and training; knowledge society; tourism; and costs and prices. In addition, the publication also includes a monograph analysing the results of the AMB's Business Climate Survey produced together with the Chamber of Commerce and Idescat.

This year's edition has revealed both positive and negative results for a year – 2020 – characterised by the socio-economic effects of the Covid-19 pandemic. In this context, it is worth noting that over this past year Barcelona has retained its position as a centre of economic activity and has ranked for the fifth consecutive year among the 25 most globally competitive cities (and among the top ten in Europe). The strengths highlighted in the previous edition – such as innovation, talent, entrepreneurship and good infrastructure, among others – have ensured the city has a strong and dynamic business fabric that has shown its resilience in a year that has been so difficult in every way. This adaptability shown by the city of Barcelona can be seen particularly clearly in the field of technology, where it has been shown to be a leading start-up hub in Europe – it has kept its fifth position in this field this past year – and one of the most promising cities for emerging technology companies, where it has been ranked as one of the top 30 cities with the best ecosystems in the world. In relation to this, Barcelona has successfully retained the trust of, and good image among, international investors, who see in the city an opportunity to do business and embark on projects that will strengthen the city's economic opportunities and prospects as a leading city



in southern Europe in the next few years. This is the result of decades of joint efforts and dedication by all economic players.

In spite of all this, the pandemic has had a major impact on tourism, a core pillar of this city that is open to the world. 2019 had yielded very positive figures in terms of airport passengers, visitors, cruise passengers, conferences and delegates. The city's appeal resides in its cultural, food, sports and educational (it has two of the best business schools in the world) assets. But the pandemic has caused the sector to screech to a halt, and many key activities – such as hotels, restaurants, part of the retail sector, transport and all the business fabric that takes place around fairs and congresses – rely on it. The suspended or intermittent activity of these sectors as a result of the restrictions is reflected in the economic stocktaking for the year. Despite this, the main benchmark indicators show that the city has retained its reputation and is still a destination favoured by international visitors, which should provide an incentive to devote all our efforts to maintaining the production fabric related to

these activities until the health crisis has come to an end, and to continue working steadfastly to transform it from a digital and environmental point of view.

In this regard, and despite the current difficulties, we must not lose sight of the medium and long-term goals we had previously set for ourselves: to strive to develop an industrial fabric based on knowledge, energy, biotechnology, ICTs, artificial intelligence, space, security, Big Data and Industry 4.0 led by the start-ups that come here attracted by the opportunities offered by Barcelona: skilled labour, quality of life and competitive costs and prices. The NextGenerationEU European funds will give us the opportunity to promote projects capable of transforming our production fabric and that will become the value and opportunities of the future.

Having said that, we at the Chamber of Commerce hope that this report will provide a useful tool for all economic and social agents, who are essential if we are to overcome this crisis, and who we are sure will work hard to make Barcelona a competitive leader in terms of added value, sustainability, innovation and social cohesion.

Mònica Roca i Aparici

President of the Barcelona Chamber of Commerce

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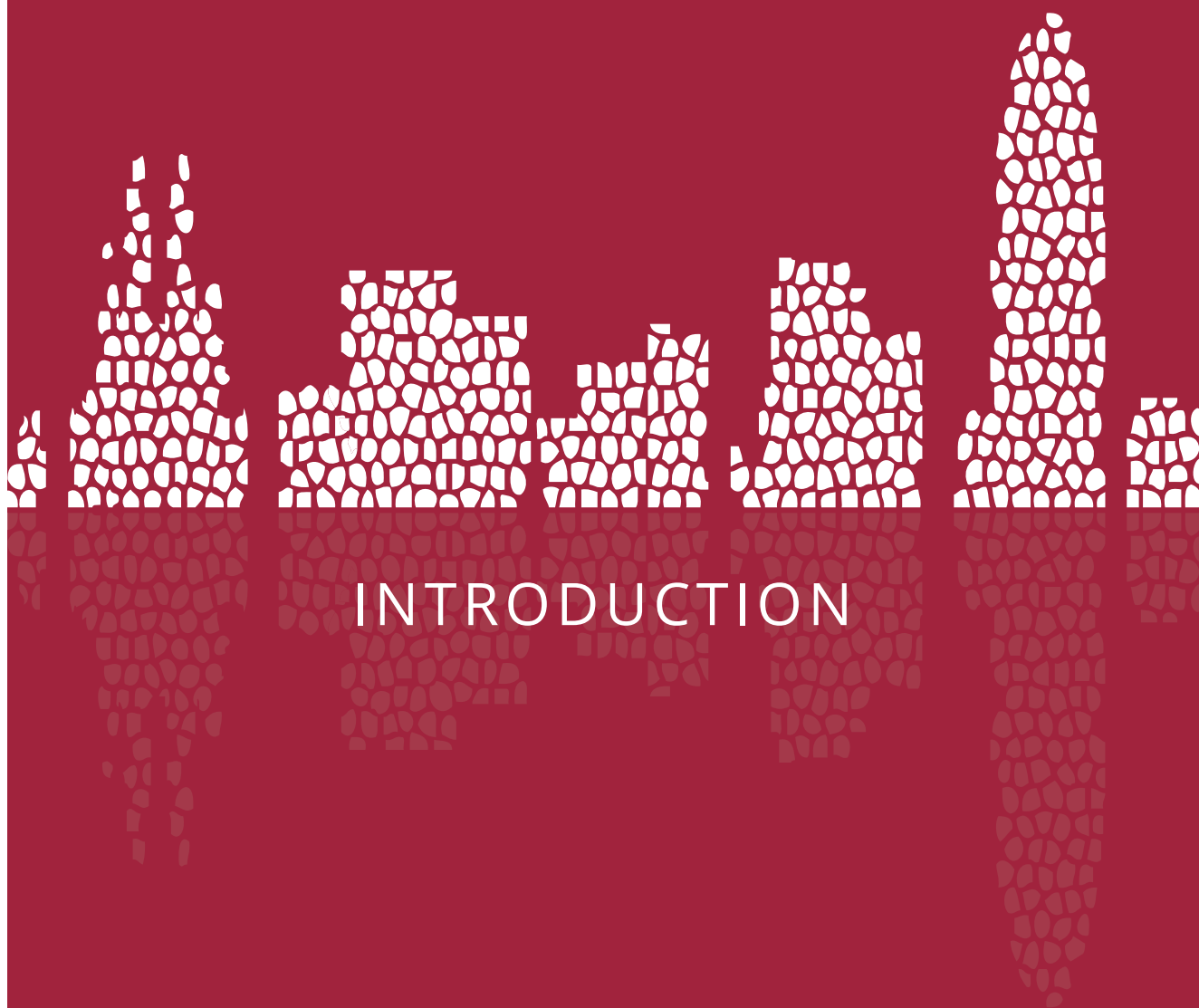
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INTRODUCTION

Introduction

We present the Barcelona Observatory's *2020 Report*.

The Barcelona Observatory is an initiative promoted by Barcelona City Council and the Barcelona Chamber of Commerce, with the collaboration of other city organisations which, year after year, take part by facilitating information and making key contributions concerning their sector of activity.

This eighteenth edition of the Barcelona Observatory's annual report aims to offer various references for decision-making by economic stakeholders wishing to do business or become established in Barcelona, in order to attract talent and provide support for candidacies for holding events or the opening of offices in the City of Barcelona. To this end, as always, the report presents Barcelona's positioning in relation to the world's major cities, based on a series of economic and social indicators.

The *2020 Report* presents a series of characteristics that are summarised below:

- A selection of 35 significant indicators that provide readers with an efficient summarised presentation of the most relevant figures from the point of view of the city's positioning, its characteristics and the goals it aims to achieve, all this presented in six thematic areas: a centre for economic activity; quality of life, sustainability and social cohesion; job market and training; the knowledge society; tourism; and costs and prices.

As a new feature, this year's report also includes 5 new indicators: technological cities of the future, and global cities that are attractive to visitors and entrepreneurs in the chapter on "Centre of Economic Activity"; tCO₂-e emissions per capita, and development of the urban public transport ecosystem in "Quality of Life, Sustainability and Social Cohesion"; and main start-up hubs in Europe in the chapter on the "Knowledge Society".

- A summary table presenting the series of indicators to showcase the results, and a graph showing Barcelona's international positioning according to various rankings.
- A monograph produced by the Chamber of Commerce presenting an analysis of the business climate in the Barcelona Metropolitan Area for 2020, which includes a specific analysis of the main economic sectors. The environment surrounding Catalonia and the City of Barcelona is therefore put into context based on business people's opinions.

The Barcelona Observatory is characterised by the following factors:

- It is based on a series of indicators, defined at city level if possible but subject to being extended to other territories.
- The sources of information are all renowned international entities and institutions.
- Most of the sources are international rankings; and, in the case of seven indicators, the data is obtained from a sample collected from the main urban areas.
- Where possible, the indicators include a graphic representation of their evolution so that their progression in each specific area can be assessed.
- The data and information collected is as up to date as possible based on current availability.



FACTS AND FIGURES
BARCELONA 2019

Facts and Figures Barcelona 2019





GEOGRAPHICAL ENVIRONMENT

Surface area (km ²)	101.4
Population (january 2020)	1,666,530
Foreign population (% of total) (january 2020)	21.7%
Density (inhabitants/km ²) (january 2020)	16,442.0
Climate (observatori Can Bruixa)	
Average monthly temperature	18.4 °C
Annual rainfall (mm)	648.0
Hours of sun	2,954.3



ECONOMIC ENVIRONMENT

DADES MACROECONÒMIQUES

GDP (var/ yr %) - Catalonia	1.9
GDP (var/ yr %) - Barcelona	2.3
Social Security membership	1,133,542
Unemployment rate 16-64 years old (%) (4Q)	8.5
Employment rate 16-64 years old (%) (4Q)	73.1
Activity rate 16-64 years old (%) (4Q)	79.9
CPI (average var. %) - Barcelona province (2020)	-0.3
Exports (million €) - Barcelona province	57,077.0
Imports (million €) - Barcelona province	73,708.4
Outbound foreign investment (million €) - Catalonia	1,261.4
Inbound foreign investment (millions €) - Catalonia	3,838.7
Companies - Barcelona province	477,734
Foreign companies in Catalonia	8,908

COMMERCE AND TOURISM

Retail premises - Barcelona province	65,734
Open-air shopping areas	22
Municipal markets (number and surface area [m ²])	43/288,218
Hotels	
Numbers	686
Beds	83,667
Tourists	9,472,562

INFRASTRUCTURE

Airport	
Runways (number and length [m])	3/3,352; 2,660; 2,528
Passengers	52,686,314
International passengers (%)	73.4
Port	
Land surface area (ha)	1,113.2
Docks and moorings (km)	23.2
Total traffic (thousands of tonnes)	67,693.4
Trade fair and congress activity	
Trade fairs	+150
Visits to Fira de Barcelona	+2,500,000
Hall surface area taken up by fairs (m ²)	+1,410,000
International meetings	1,733



TRAINING AND CITY OF KNOWLEDGE

Catalan Universities	12
University students in Catalonia (course 2018/2019)	258,922
Foreign students (province of Barcelona) (course 2018/2019)	24,476
Innovative companies in Catalonia	6,378



QUALITY OF LIFE

Beaches (number and metres)	10; 4,780
Bike lanes (km and biking members)	210.8; 111,911
Public libraries (number and users)	40; 6,729,140
Museums, collections and exhibition spaces (number and users)	71; 26.8
Public sports facilities (number and users)	1,912; 192.9
Theater, music and cinema spectators	9,522, 659

Source: AENA, Barcelona City Council, Fira de Barcelona, Generalitat of Catalonia, Idescat, INE, State Ports, Secretary of State for Trade, Turisme de Barcelona, Institute of Culture of Barcelona.



RESULTS

The first part of the paper discusses the importance of the research and the objectives of the study. It highlights the need for a comprehensive understanding of the subject matter and the role of the researcher in this process. The second part of the paper presents the methodology used in the study, including the data collection methods and the analysis techniques. The third part of the paper discusses the results of the study and the conclusions drawn from the findings. The final part of the paper provides a summary of the key points and offers suggestions for future research.

The research was conducted in a systematic and rigorous manner, following the principles of scientific inquiry. The data was collected from a representative sample of the population, and the analysis was performed using advanced statistical techniques. The results of the study indicate that there is a significant relationship between the variables under investigation, and this finding has important implications for the field of study.

In conclusion, the study has provided valuable insights into the subject matter and has contributed to the existing body of knowledge. The findings suggest that further research is needed to explore the underlying mechanisms and to test the generalizability of the results. The authors hope that this paper will serve as a useful reference for researchers and practitioners alike.



Hub of economic activity



Introduction

Barcelona's economy performed well in 2019 in terms of economic and job market activity, and the city's GDP rose by 2.3% for the year, driven by the favourable performance of internal demand, in particular family consumption, and an increase in business investment, although there was a certain amount of deceleration during the year. Thus, between 2014 and 2019, the city has enjoyed six consecutive years of interannual growth in business activity and maintained a more favourable macro-economic trend than the Euro zone as a whole. In 2020, the Covid-19 pandemic has unleashed an economic crisis of unprecedented intensity on a global scale and in the third quarter the interannual variation in Catalonia's GDP was -8.8%, in a context of great uncertainty. The forecasts for 2020 are a steep fall in Catalan economic activity which, like the Spanish, could maintain a less favourable trend than the Euro zone as a whole, in the midst of a crisis affecting the economies of southern Europe particularly hard.

Faced with this complex economic context, Barcelona City Council has set up the Economic Response Coordination Centre (CECORE) to come up with a specific action plan that defines the necessary measures and actions for Barcelona's economic recovery. These measures are in line with the Barcelona Green Deal, the city's Economic Agenda which offers a comprehensive, executive and long-term roadmap that is open to public debate based on three strategic goals: competitiveness, sustainability and equity.

As regards its international positioning, for the fifth year running Barcelona is among the 25 most competitive cities worldwide according to the Mori Memorial Foundation's report *Global Power City Index 2020*, ranked 21st globally and 9th in Europe. That means it is still ahead of Boston, Geneva or Milan and stands out in the livability and cultural interaction categories – 5th and 13th respectively. Moreover, the Resonance Consultancy ranking *World's Best Cities 2021*, which assesses the quality and attractiveness of cities from various perspectives, puts Barcelona at 8th in the world, ahead of San Francisco, Amsterdam or Berlin.

Barcelona has also reaffirmed its status as a benchmark tech hub in Europe, coming eighth among cities with the most promising prospects for tech start-ups and second among those with the best strategy for attracting foreign investment in this sphere in the first *Tech Cities*

of the Future ranking (2020-21), according to fDi Intelligence.

Other indicators reaffirm Barcelona's appeal for doing business and the city's positive image abroad. For example, the confidence it generates among international investors is shown by the fact it is the 2nd city in southern Europe as regards perspectives for 2020-2021, the 10th city in Europe in terms of economic potential and the 3rd in connectivity between major European cities, according to the report *FDi Cities and Regions of the Future 2020/21* (Financial Times group). Likewise Barcelona is the 9th most attractive city for international investors according to the EY Attractiveness Survey Europe 2019, and it was ranked 7th among the main urban areas of the world for attracting foreign investment projects in 2018, as well as the 4th city for attracting R&D projects.

Regarding international trade fairs and congresses, Barcelona was the world leader for the third year running in 2019 in the number of participants and 4th for the number of meetings organised, in the ranking compiled by the International Congress and Convention Association (ICCA).

As for entrepreneurship, the total early-stage entrepreneurial activity (TEA) rate in Catalonia in 2019 was 8.3%, ahead of Sweden (8.2%), Germany (7.6%) and Italy (2.8%), while the Barcelona province rate (7.1%) was above the Spanish average (6.1%) and the rate for Catalan women entrepreneurs (7.3%) about the same as the EU rate (7.4%). The Barcelona Chamber of Commerce and Barcelona City Council are both working in this area to promote entrepreneurship and help to create high quality jobs in the city.

In 2020 Barcelona retains its place among the 25 most competitive cities in the world

Global competitiveness of world cities in 2020

For the fifth year running, Barcelona is among the top 25 cities for global competitiveness

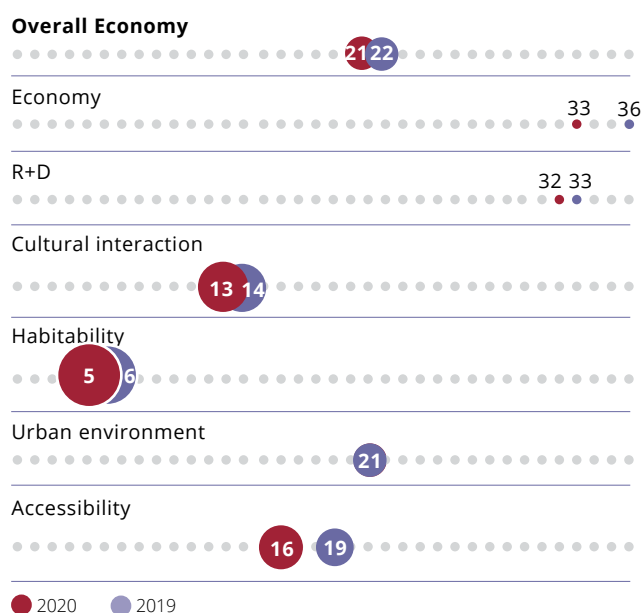


In 2020, the *Global Power City Index* report, which compares 48 major world cities, ranked Barcelona 21st in the world and 9th in Europe for its global competitiveness. In a classification headed by the big metropolises of London, New York, Tokyo, Paris and Singapore, Barcelona has improved its position in the world by one place and in Europe by two, superseding San Francisco and Stockholm and staying ahead of Boston, Geneva and Milan. The city therefore reaffirms its position in the world and European rankings as one of the top 25 world cities for the fifth year running, despite scoring slightly less overall score compared to last year, as have most of these cities.

Since 2008, the Japanese Mori Memorial Foundation, with the collaboration of renowned universities and think tanks, has compiled the *Global Power City Index*, a report based on the results of 70 indicators divided into six categories of urban competitiveness. In 2020, Barcelona is ranked 5th in the world for livability, 13th for cultural interaction, 16th for accessibility and 21st for the environment, while occupying the 32nd and 33rd places, respectively, for R&D and economy. Compared to 2019, it has made progress in all the cat-

Categories of urban competitiveness

(Positioning of Barcelona)



Source: *Global Power City Index 2020*. Institute of Urban Strategies. The Mori Memorial Foundation.

egories except environment, where its position is the same. Moreover, Barcelona is the 8th most valued city in the view of its residents, while skilled professionals from around the world place it 10th, tourists 11th and executives 31st.

Global competitiveness of cities around the world. 2020

Position	City	European ranking
1	London	1
2	New York	
3	Tokyo	
4	Paris	2
5	Singapore	
6	Amsterdam	3
7	Berlin	4
8	Seoul	
9	Hong Kong	
10	Shanghai	
11	Sydney	
12	Los Angeles	
13	Madrid	5
14	Melbourne	
15	Beijing	
16	Vienna	6
17	Dubai	
18	Toronto	
19	Copenhagen	7
20	Zurich	8
21	Barcelona	9
22	Stockholm	10
23	Frankfurt	11
24	San Francisco	
25	Chicago	
26	Vancouver	
27	Boston	
28	Brussels	12
29	Geneva	13
30	Moscow	14
31	Dublin	15
32	Helsinki	16
33	Osaka	
34	Istanbul	17
35	Bangkok	

Source: *Global Power City Index 2020*. Institute of Urban Strategies. The Mori Memorial Foundation.

Technological cities of the future in Europe in 2020

Barcelona is Europe's 8th tech city of the future



Barcelona has positioned itself as the eighth most promising city in the world for tech start-ups in the first edition of the ranking *Tech Cities of the Future, 2020-21*, according to fDi Intelligence. This global ranking is headed by London, which leads all the categories except for profitability: innovation and attractiveness, economic potential, foreign direct investment (FDI) performance and start-up scene. Barcelona stands out in the FDI category, achieving 5th place behind London, Dublin, Paris and Amsterdam. Likewise, the report recognises the Catalan capital (and the Principality itself) as the 2nd city in Europe in terms of the best strategy for attracting foreign investment in technology, noting how Barcelona/Catalonia has reinforced this position by hosting the main global tech events, namely, the Mobile World Congress and Smart City Expo. In addition, its infrastructures (which include science parks, new universities and the 200 ha innovation district 22@) help to boost the attractiveness of Barcelona and the surrounding region for international tech companies.

Savills also include the Catalan capital among the 12 most important international metropolises in the tech sphere, for combining the presence of a growing tech industry with high standards of well-being, in their Tech Lifestyle Cities index which is part of the *Tech Cities 2021* report. This category recognises those cities with a population under five million inhabitants that are characterised as

being outstanding innovation hubs in their region, a pole of attraction for risk capital investment and enjoying features such as an ample cultural and leisure offering that ensures high standards of well-being, an aspect acquiring greater relevance in a post-pandemic world. Savills also recognises the city as the fifth most attractive for attracting young professionals in the tech sector.

Top 25 Tech Cities of the Future in Europe 2020

Ranking	City	Country
1	London	United Kingdom
2	Paris	France
3	Dublin	Ireland
4	Amsterdam	Netherlands
5	Berlin	Germany
6	Munich	Germany
7	Bucharest	Romania
8	Barcelona	Spain
9	Belfast	United Kingdom
10	Cambridge	United Kingdom
11	Madrid	Spain
12	Stockholm	Sweden
13	Frankfurt	Germany
14	Zurich	Switzerland
15	Warsaw	Poland
16	Edinburgh	United Kingdom
17	Reading	United Kingdom
18	Moscow	Russia
19	Helsinki	Finland
20	Sofia	Bulgaria
21	Milan	Italy
22	Prague	Czech Republic
23	Tallinn	Estonia
24	Krakow	Poland
25	Glasgow	United Kingdom

The 10 main cities in Europe for Direct Foreign Investment in technological projects



Source: *Tech Cities of the Future 2020/21*. fDi and TNW.

Source: *Tech Cities of the Future 2020/21*. fDi and TNW.

Main world urban areas receiving international investment projects in 2018

Barcelona, 7th global urban area for foreign investment projects



KPMG's *Global Investment Monitor 2019* places Barcelona in 7th position among the main urban areas in the world for attracting *greenfield* foreign investment projects in 2018. The city therefore climbs two places in comparison with the previous year's ranking. One of the contributing factors for this rise is the city's favourable positioning in attracting R&D projects, a sphere where it is ranked as the 4th global area with 29 projects, just behind Paris, Singapore and Bangalore.

Barcelona is the 2nd city in southern Europe as regards perspectives for 2020-2021, the 10th city in Europe in terms of economic potential and the 3rd in connectivity between major European cities, according to the report *fDi Cities and Regions of the Future 2020/21* (Financial Times group). Furthermore, according to the *EY Attractiveness Survey Europe 2019*, Barcelona is the 9th most attractive city for international investors, in a context where the uncertainty associated with Brexit is affecting the volume of foreign investment throughout Europe.

Productive foreign investment in Catalonia in 2019 was €3.221 billion, while 8,908 foreign companies located here, coming mainly from Germany, France and the United States. Finally, according to an ACCIO report based on data from FDI Markets (Financial Times group), between 2014 and 2018, Catalonia attracted a total of 665 foreign investment projects worth €16.295 billion creating 63,005 direct jobs, and it is ranked 3rd in the Western European region for job creation.

Main world urban areas receiving international investment projects in 2018

2017 position	Urban area	2018 position
1	London	1
3	Paris	2
2	Singapore	3
4	Dubai	4
6	New York	5
5	Shanghai	6
9	Barcelona	7
6	Hong Kong	8
23	Düsseldorf	9
16	São Paulo	10
15	Madrid	11
11	Amsterdam	12
14	Tokyo	13
10	Dublin	14
12	Sydney	15
26	Mexico	16
8	Bangalore	17
24	Warsaw	18
17	Frankfurt	19
21	Melbourne	20

NB: *Greenfield* projects..

Source: *Global Cities Investment Monitor 2019*. KPMG.

Principal urban areas around the world for attracting foreign investment in R+D projects. 2018

Paris	47
Singapore	42
Bangalore	33
Barcelona	29
Shanghai	24
Hyderabad	22
London	19
Pune	14
Madrid	12
Belfast	12

Source: *Global Cities Investment Monitor 2019*, KPMG.

Entrepreneurial activity in countries around the world in 2019

Catalonia's rate is higher than those of Sweden, Germany and Italy



According to *Global Entrepreneurship Monitor* (GEM) data, the 2019 total early-stage entrepreneurial activity (TEA) rates for the resident population of Catalonia was 8.3%, an increase of 0.2% compared to the previous year. Despite a reduction in interannual terms, the Barcelona province rate of 7.1% was still above the Spanish average (6.1%).

This trend meant that the TEA rate for Catalonia was better than those for Sweden (8.2%), Germany (7.6%) and Italy (2.8%). Furthermore, Catalonia was the Spanish autonomous region with the highest TEA rate, above that of Madrid and the Spanish average, although below the European Union rate of 9.4%.

As for women's TEA, the Catalan rate (7.3%) was similar to the EU's (7.4%) and above those for the Barcelona area and Spain (6.7% and 6% respectively) while the difference between the men's and women's rates in Barcelona was down to 0.9%.

Turning to the quality of entrepreneurial activity, the 2019 results provide positive data such as the clear predominance of proactive (pull) reasons for starting a business (making a difference in the world or creating a lot of wealth) over reactive reasons (creating wealth because work is scarce) both in Barcelona and Catalonia, as well as a tendency to increase the size of new Catalan businesses. By contrast, there was drop in the percentage of new entrepreneurs (men and women) in the Principality with a post-secondary education to 42%, below the European average of 53%.

Entrepreneurial activity rate in various countries around the world in 2019

(% of 18- 64 year-old population)

TEA for women	Country	Total TEA
23.1	Brazil	23.3
15.1	Canada	18.2
16.6	United States	17.4
10.2	Slovakia	13.3
10.4	Israel	12.7
9.0	Ireland	12.4
7.8	Morocco	11.4
9.2	Netherlands	10.4
7.3	Switzerland	9.8
7.4	EU average	9.4
7.0	United Kingdom	9.3
7.9	China	8.7
6.8	Taiwan	8.4
7.3	Catalonia	8.3
5.8	Sweden	8.2
7.6	Greece	8.2
5.6	Slovenia	7.8
5.7	Germany	7.6
6.7	Barcelona	7.1
6.0	Spain	6.1
5.1	Poland	5.4
2.1	Italy	2.8

NB: Entrepreneurial activity includes nascent companies (less than 3 months of activity) and new companies (between 3 and 42 months of activity). The original database contains 63 countries, although the table only includes a selected sample of countries for reference.

Source: *Global Report* and *Informe Executiu Catalunya 2019-2020*, Global Entrepreneurship Monitor (GEM).

Entrepreneurial activity in Europe. 2019
(% of population 18-64 years of age)



Source: Global Report and Executive Report for Catalonia 2019- 2020. Global Entrepreneurship Monitor (GEM).

Attractive global cities for visitors and entrepreneurs in 2021

Barcelona is 8th among the world's cities and 3rd in Europe



In 2021, Barcelona occupies 8th place in the world and 3rd in Europe among the most attractive global cities for visitors, entrepreneurs and residents, according to the *2021 Ranking of World's Best Cities* drawn up by Resonance Consultancy Ltd at the end of 2020.

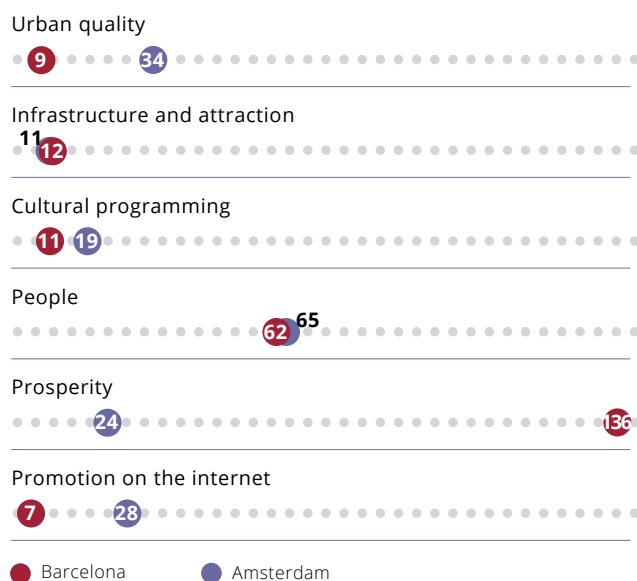
This ranking is based on the premise that infrastructures and urban experiences, besides attracting tourism, spur economic growth and international investment. It uses a methodology that combines statistical data with the qualitative assessments of visitors and local population.

Barcelona's result is the same as in the three previous years, and in 2021 it is above Los Angeles, San Francisco, Amsterdam and Berlin, among other cities, in a classification headed by London, New York and Paris.

As regards the ranking's partial results, Barcelona's best are 7th place in online promotion, followed by 9th in urban qual-

ity, 11th in cultural programming and 12th in infrastructure and attractiveness. However, in the chapter on people it is in 62nd place, taking into account the diversity and education level of its population, while in the one on prosperity, it is at the bottom due to the relatively low presence of multinational companies and the unemployment rate. If compared to Amsterdam, a benchmark city in Europe, the Dutch capital is better positioned in infrastructure and attractiveness (11th) and clearly more advantageous in prosperity (24th) while the Catalan capital comes out on top in the other categories. The report notes that Barcelona's current and future appeal is very much conditioned by the effects of the pandemic.

Position of Barcelona and Amsterdam in assessment categories



Source: *World's best cities report*. Resonance Consultancy Ltd. 2021.

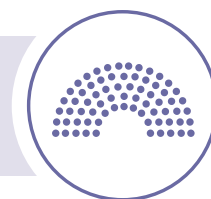
Attractive global cities for visitors and entrepreneurs 2021

Ranking 2020	City	Ranking 2021
1	London	1
2	New York	2
3	Paris	3
5	Moscow	4
4	Tokyo	5
6	Dubai	6
7	Singapore	7
8	Barcelona	8
9	Los Angeles	9
12	Madrid	10
10	Roma	11
13	Chicago	12
17	Toronto	13
11	San Francisco	14
14	Abu Dhabi	15
35	St. Petersburg	16
15	Amsterdam	17
28	Berlin	18
29	Prague	19
26	Washington	20

Source: *World's best cities report*. Resonance Consultancy Ltd. 2021.

Main cities in the world for the number of international congresses and delegates in 2019

Barcelona is the top city in the world for the number of delegates at international congresses

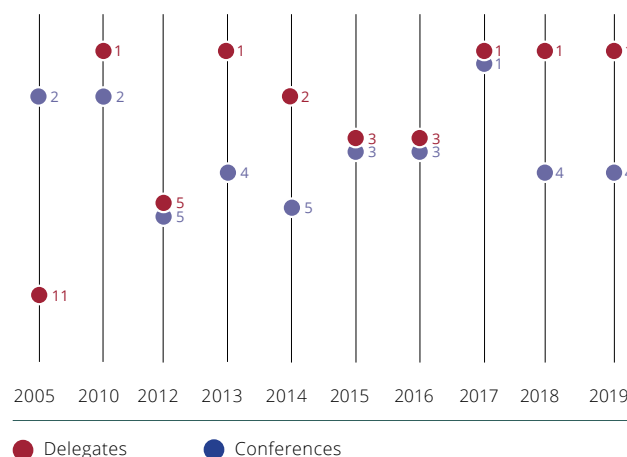


Barcelona tops the 2019 world cities ranking for the number of delegates and occupies 4th place for the number of international congresses organised, according to the International Congress and Convention Association (ICCA). A total of 156 meetings have been held here in the course of 2019, seven fewer than 2018, ensuring it stays in the top five of this ranking for the 20th year running. Moreover, the number of participants at international meetings in Barcelona has increased by 16.3%, so for the third year running it stays in 1st position, with 156,754 delegates. Compared to 2018, nine cities remain in the top 10 of the congress ranking, with Bangkok being replaced by Tokyo, while in the participant ranking, Lisbon, London and Milan joined the top 10, in detriment to the three cities that dropped out: Munich, Toronto and Singapore. It should be noted that the ICCA bases its ranking on participant registrations in congresses with a minimum of 50 delegates and which rotate between at least three different countries. It therefore does not include such important events for the city as the Mobile World Congress.

In 2020 the Covid-19 pandemic has resulted in an unprecedented fall in business tourism with the cancellation of many trade fairs and congresses. However, even though professional events have been cancelled until at least mid-Janu-

ary, 110 congresses and other events have already been confirmed in Barcelona over the coming years. In addition, Barcelona has been selected from among other competing cities to hold three major events in 2022 and 2023, namely, the ESC Congress (2022), the UITP Global Transport Summit (2023) and the 36th ECNP Congress (2023).

Position of Barcelona



Source: International Congress and Convention Association (ICCA).

Principal cities in the world for number of international congresses and delegates. 2019

Cities	Variation 2019/2018 (%)	2019 Congresses
Paris	11.8	237
Lisbon	25.0	190
Berlin	8.6	176
Barcelona	-4.3	156
Madrid	-6.7	154
Vienna	-13.4	149
Singapore	2.1	148
London	-4.7	143
Prague	1.5	138
Tokyo	6.5	131

Cities	Variation 2019/2018 (%)	2019 Delegates
Barcelona	16.3	156,754
Paris	-1.7	124,063
Madrid	27.8	91,900
Lisbon	50.2	91,406
Vienna	-15.0	89,009
Berlin	-2.9	85,089
London	38.9	76,114
Milan	153.9	71,554
Copenhagen	-14.3	69,110
Amsterdam	-20.6	67,962

Source: International Congress and Convention Association (ICCA).
n. a.: not available.



Quality of life, sustainability and social cohesion



Introduction

Barcelona was involved in the launch of the UN's Agenda 2030, which features 17 Sustainable Development Goals (SDGs), and seeks alliances with other cities, governments and players in order to tackle climate change and reduce inequalities, among other shared challenges. During its 2019-2023 term of office, Barcelona City Council aligns its municipal policies with the Agenda 2030 – starting with the action plan for this term of office – and promotion of alliances with civil society and economic sectors that will help to improve the quality of people's lives and social cohesion and create a city that is more environmentally friendly.

As for aspects associated with a good quality of life, Barcelona is considered to be the 26th safest city in the world according to *The Safe Cities Index 2019*. The city is also an international benchmark in the field of sport – coming 7th in the Ranking of Sports Cities 2020 – an activity which, besides contributing directly to the quality of life of the city's residents, is making a significant economic and social impact. On the other hand, the city is a benchmark for its cultural and creative vitality, according to the result of the *The Cultural and Creative Cities Monitor 2019*, prepared by the European Commission, where it came 9th in the global index and stood out in the areas of human capital and training, employment in creative and intensive activities in knowledge and openness, tolerance and trust (where it came 2nd, 5th and 6th, respectively, among cities with over a million residents).

The COVID pandemic in 2020 has had a widespread negative impact on the quality of life and job market in all the world's cities. Barcelona has been especially badly hit by its consequences owing to its open visitor economy as well as the lockdown and its restrictive measures on economic activity which have affected employment and other economic indicators. This intense impact on the city has led to Barcelona's fall from 8th to 35th place among the world's cities showing a better balance between work and personal life, according to the ranking of the *Cities for the Best Work-Life Balance 2020*, where – in any case – the city continues to stand out in the areas of tolerance and inclusion (where it comes 5th), number of holidays (1st), social expenditure (13th) and well-being and physical fitness (13th).

As for social cohesion, in 2019 the risk of poverty or social exclusion rate of the entire population of Catalonia was below the EU's, with both having dropped slightly since the previous year. In Barcelona, in 2017, over half the resident population (52.9% of the total) lived in a low-income neighbourhood for the first time since 2009, despite the fact that 5.9% of households in 2019 suffered from severe material deprivation, a rate similar to the EU average.

As for sustainability, Barcelona is among the 88 cities most committed to the fight against the climate emergency and heads, together with Oslo, the classification of cities with fewer emissions per capita, according to the *Cities Climate Leadership Group's* C40 platform. The city has been following the Barcelona Climate Plan since 2018, with the aim to reduce the city's per capita emissions by 50% by the year 2030 (compared to 1992) and to be carbon neutral by 2050. In addition, the City Council declared a climate emergency in 2020, since when it has been following the guidelines set out in the international Climate Emergency Declaration.

Finally, as regards sustainable mobility, Barcelona as a city came 18th in the world and 9th in Europe in its development of an urban public-transport ecosystem, according to the *Urban City Readiness Index 2020* report from the University of Berkeley and the Oliver Wyman Forum. Barcelona was also ranked as the 13th friendliest city in the world for bicycles, according to *Copenhagenize Index 2020*, a ranking headed by Copenhagen and Amsterdam.

Barcelona,
one of the most
committed cities
to the fight against
climate change

Safety in cities round the world in 2019

Barcelona is among the thirty safest cities in the world



According to the *Safe Cities Index 2019*, a report produced by the British magazine *The Economist*, Barcelona was ranked 26th out of 60 cities across all continents, in a list topped by Tokyo, Singapore and Osaka. It came 10th among European cities, behind Amsterdam, Stockholm and Paris, and ahead of Milan and Rome. In the previous edition – produced in 2017 – Barcelona came 13th in the world ranking; all in all, Barcelona's score in the 2019 index (81.2) was 10 points above the average, and among the top half of the cities analysed.

The report's results are based on 57 indicators covering digital security, health security, infrastructure security and personal security. Note that Barcelona came 3rd in infrastructure security, an area in which the city maintained the good position it had in the 2017 ranking. The aspects taken into account include investment in and management of the city's infrastructures and its vulnerability to natural disasters. As regards the other areas analysed, the city came 19th in personal security – above cities such as Paris, London and Milan –, 24th in the area of health security and 28th in digital security, dropping 2, 8 and 7 places respectively, in comparison to the previous ranking.

Urban security categories

(position of Barcelona)

Digital



Health



Infrastructures



Personal security



Global index



● 2018 ● 2019

Source: *The Safe Cities Index 2019*, The Economist Intelligence Unit.

Safety in cities round the world in 2019

Position	City	Index o/100
1	Tokyo	92.0
2	Singapore	91.5
3	Osaka	90.9
4	Amsterdam	88.0
5	Sydney	87.9
6	Toronto	87.8
7	Washington DC	87.6
8	Copenhagen	87.4
9	Seoul	87.4
10	Melbourne	87.3
11	Chicago	86.7
12	Stockholm	86.5
13	San Francisco	85.9
14	London	85.7
15	New York	85.5
16	Frankfurt	85.4
17	Los Angeles	85.2
18	Wellington	84.5
19	Zurich	84.5
20	Hong Kong	83.7
21	Dallas	83.1
22	Taipei	82.5
23	Paris	82.4
24	Brussels	82.1
25	Madrid	81.4
26	Barcelona	81.2
27	Abu Dhabi	79.5
28	Dubai	79.1
29	Milan	78.1
30	Rome	76.4
	Average	71.2
31	Beijing	70.5
32	Shanghai	70.2

Source: *The Safe Cities Index 2019*. The Economist Intelligence Unit.

Sport in cities around the world 2020

Barcelona, the 7th city most associated with sport



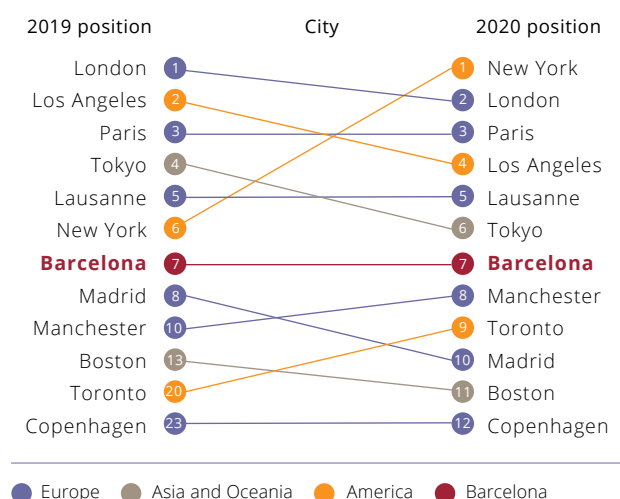
Barcelona came 7th, for the third year running, among the 50 cities assessed in the *Ranking of Sports Cities 2020*, prepared by the Burson Cohn and Wolfe consultancy based on a vote where specialist opinion leaders and the general public decide which cities are most strongly associated with sport.

The city has maintained a position among the top ten since the first edition (2012), a record shared only by other Olympic cities such as London and Tokyo. Barcelona's importance as a sports city comes from the fact that it regularly plays host to big top-level international sports events and competitions, a legacy of the 1992 Olympic and Paralympic Games, sports-related activities on digital platforms and the attraction created by big metropolitan-scale clubs, positioning Barcelona as a sport tourism destination.

Sport has a great economic and social impact on the city and contributes to a direct improvement in the quality of city residents' lives. According to the latest Survey on Barcelona's Sports Habits, 71.6% of the people interviewed did sport; by sex, 74.4% of men and 69.2% of women did sport, and by age, note that doing sport was widespread among young people, with over 80% between the ages of 17 and 35 actively doing sport.

On the other hand, during the 18/19 season, the city's main club, – FC Barcelona – generated economic activity totalling 1,190 million euros representing 1.5% of the city's GDP and had a direct, indirect and induced impact of 19,500 jobs, according to a report from the PwC consultancy firm.

Sport in cities round the world. 2020



Source: *Ranking of Sports Cities 2020*. Burson, Cohn & Wolfe.

¹The 2019 ranking was elaborated by Burson Cohn using the same methodology which had been done in previous years by Around the Rings and TS Consulting.

Work-life balance in the context of the COVID crisis in cities round the world, 2020

Barcelona drops down the ranking but excels in tolerance and inclusion

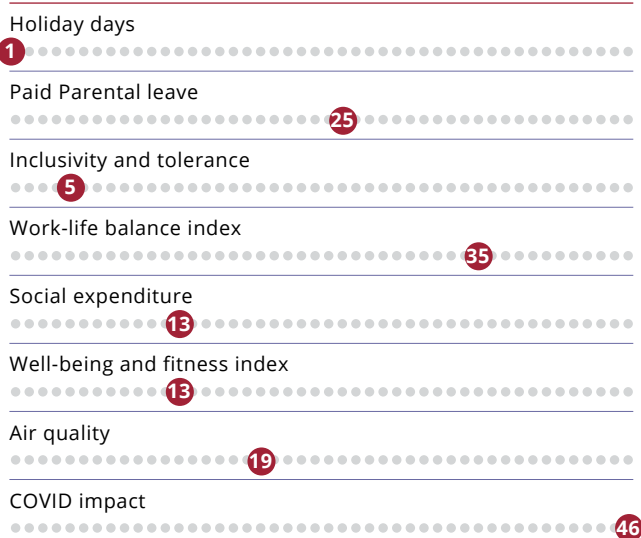


According to the 2020 *Cities for the Best Work-Life Balance* ranking, prepared by Kisi, the secure technological-access company, Barcelona came 35th among the fifty world cities compared, and 13th among European cities, based on 19 indicators on intensity of work, social services and official support for equality and quality of life and effects of the COVID pandemic. This year's index extended its scope and – in addition to the usual sections – measured the impact of COVID on work-life balance, taking into account the features of the pandemic and its impact on the economic and labour areas.

With the introduction of this factor, Barcelona's positioning was clearly affected – in 2019 it had come 8th – and the city achieved a low-middle position on the index, in a ranking headed by three Scandinavian capitals: Oslo, Helsinki and Copenhagen, and Barcelona obtained a higher place than Brussels, Boston, New York and Milan and was ranked close to London, Madrid and Miami.

By areas, the city stands out in inclusivity and tolerance indexes (where it places the 5th position), vacation days (1st), social expenditure (13th) and well-being and fitness index (13th). While it places an intermediate position in paid maternity/paternity leave (25th) and is among the last five cities in indicators related to the COVID-19.

Position of Barcelona in assessment categories 2020



Source: Kisi. *Cities for the Best Work-Life Balance* 2020.

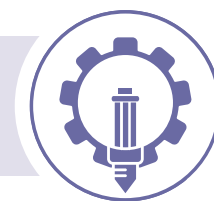
Work-life balance index 2020

Global ranking	City	Total score
1	Oslo	100.0
2	Helsinki	95.8
3	Copenhagen	93.8
4	Hamburg	93.2
5	Berlin	90.3
6	Munich	90.1
7	Vienna	89.4
8	Zurich	88.2
9	Stockholm	85.2
10	Calgary	85.0
11	Ottawa	84.6
12	Amsterdam	83.9
13	Vancouver	83.7
14	Auckland	82.8
15	Toronto	81.9
16	Denver	80.4
17	San Diego	79.3
18	Portland	79.3
19	Tokyo	78.9
20	Seattle	78.8
21	Sydney	77.9
22	San Francisco	76.6
23	Atlanta	75.4
24	Melbourne	75.3
25	Paris	74.0
26	Washington DC	73.9
27	Chicago	73.9
28	Dublin	73.4
29	Las Vegas	72.6
30	Philadelphia	72.6
35	Barcelona	71.8

Source: Kisi. *Cities for the Best Work-Life Balance* 2020.

Creative and cultural cities of Europe, 2019

Barcelona among the top ten creative and cultural cities in Europe



Barcelona came 9th in the European index of creative vibrancy, according to the *Cultural and Creative Cities Monitor 2019*, a tool created by the European Commission featuring a wide range of indicators for 190 cities in 30 European countries actively committed to promoting culture and creativity. With this tool, the Commission seeks to emphasise the importance of culture and creativity for life in cities, for their resilience as well as their development, since a clear correlation has been detected between cultural activity, in its broadest sense, and economic growth.

The report presents the results by groups of cities, based on population size. It analyses aspects relating to cultural vibrancy, the creative economy and an enabling environment, and it groups them in a global index of creative vibrancy, which is headed by Paris, Munich and London, among cities with over a million residents.

Barcelona stood out in particular in the facilitating-environment section among cities with over a million residents, reaching 2nd place in human capital and training –behind Paris alone–, and 6th in the openness, tolerance and trust indicator, whereas it came 11th in local and international connections and 14th in quality of governance.

As regards the creative economy, Barcelona scored well in jobs in creative sectors – reaching fifth place, ahead of London and Rome, but behind Munich and Madrid – and was among the top 15 in intellectual property and new jobs. In the cultural-intensity section, Barcelona stood out, reaching sixth place in cultural facilities and 9th in participation in culture, among cities with more than a million residents.

The results of 2019 showed a notable stability compared to the previous year, with the exception of the quality of governance section, where a widespread drop was observed. As for large geographic areas, it was the cities from the north of Europe that achieved the best overall results, followed by cities from the west and south of Europe, where the latter stood out in the area of cultural intensity.

Creative and cultural cities. 2019

Position	City	Creative intensity index
1	Paris	66
2	Munich	41
3	London	36
4	Milan	35
5	Berlin	34
6	Vienna	33
7	Budapest	33
8	Prague	33
9	Barcelona	31
10	Hamburg	29
11	Madrid	28
12	Warsaw	27

NB: Cities with more than a million residents.

Source: *Cultural and Creative Cities Monitor 2019*. European Commission's Joint Research Centre.

Culture and Creativity Categories. Position of Barcelona

Cultural Facilities	8
Participation in Culture	9
Creative jobs	4
Intellectual property	10
New jobs	14
Human capital and training	2
Openness, Tolerance and Trust	6
Local and international connections	11
Quality of Governance	11

NB: Cities with more than a million residents.

Source: *Cultural and Creative Cities Monitor 2019*. European Commission's Joint Research Centre.

Population at risk of poverty or social exclusion in European regions in 2019

The percentage of people at risk of poverty or social exclusion in Catalonia, lower than in the European Union



According to Eurostat figures, the percentage of the population at risk of poverty or social exclusion (AROPE) in Catalonia was 18.8% in 2019. This was lower than the rate for Spain (25.3%) and the European Union (21.4%). Regions with higher rates than Catalonia included Dublin, Berlin and Vienna, while the regions with similar values include Amsterdam, Lisbon and Madrid. Regions such as Prague and Helsinki had the lowest rates in the sample, with values between 7.5% and 10.5%. Catalonia's rate dropped slightly (by 0.1 per cent) compared to the previous year, similar to the behaviour seen in the rest of Europe.

If we calculate the percentage of the population at risk of poverty based on the specific threshold for Catalonia (60% of the average annual disposable income of the Catalan population, after social transfers, rather than the state-wide average), the AROPE rate stood at 23.6%,¹ 1.1% higher than the figure for the previous year and also above the average for the European Union. Similarly, the AROPE rate came 25.1% for the Barcelona Metropolitan Area during the 2017-18 period.

One of the components of the AROPE rate is severe material deprivation.² According to the Municipal Data Office, this type of deprivation affected 5.9% of households in Barcelona in 2019 – a rate similar to the EU average – and was more intense in households consisting of a mother or father with children (12.1%) and those sustained by women (7.5%).

Population at risk of poverty or social exclusion. 2019

Country	Region (principal city)	AROPE Rate (%)
Czech Republic	Prague (PRAGUE)	7.9
Slovakia	Bratislava Region (Bratislava)*	7.9
Finland	Helsinki-Uusimaa (Helsinki)	10.1
Romania	Bucharest - Ilfov (Bucharest)	14.0
Sweden	Stockholm (Stockholm)	14.8
Italy	Lombardy Milan)	15.7
Germany	Bavaria (Munich)**	16.1
Norway	Oslo og Akershus (Oslo)	16.2
Poland	Wojewodztwo Mazowieckie (Warsaw)	16.8
Denmark	Hovedstaden (Copenhagen)	17.5
Netherlands	Netherlands - West (Amsterdam)	17.7
Portugal	Lisbon Metropolitan Area	17.8
Spain	Catalonia (Barcelona)	18.8
Spain	Community of Madrid (Madrid)	19.0
Ireland	Ireland - east and centre (Dublin)*	19.4
Switzerland	Espace Mittelland (Bern)	21.0
EU-28 average (e)		21.4
Bulgaria	Bulgaria - south-west (Sofia)	22.6
Germany	Berlin (Berlin)**	24.1
Greece	Attica (Athens)	24.8
Spain		25.3
Austria	Vienna (Vienna)*	27.5
Italy	Laci (Rome)*	27.5
Belgium	Brussels	37.8

* Data from 2018 ** Data from 2018 2017 (e) Estimation

NB: The 'At Risk of Poverty or Social Exclusion' rate (AROPE) indicates the percentage of the population that is, at a minimum, in one of the following circumstances: at risk of poverty, severe material deprivation or living in households with very low labour intensity.

Source: Eurostat

²Data from Idescat.

³The population with severe material deprivation includes individuals with living conditions restricted by lack of resources who can not afford at least four of the nine following items: paying rent, mortgage or public-service invoices, keeping their home sufficiently warm, covering unexpected expenses, regularly eating meat or food with protein, going on holiday, having a car, having a washing machine, having a colour television set or having a telephone.

tCO₂-e emissions per capita in European cities in 2020

Barcelona, among the cities with fewer greenhouse gas emissions per inhabitant



Barcelona and Oslo share the top place in the list of cities with fewer tCO₂ equivalent emissions per capita, at 1.80 tonnes per inhabitant in 2018, representing an improvement of 0.09 tonnes compared to the previous year. Other cities positioned at around 2 tonnes per residents include Paris and Copenhagen.

According to the Barcelona Energy Agency, this result from Barcelona was largely due to its being a compact, Mediterranean city, with conditions enabling low energy-consumption ratios per inhabitant compared to other cities. At the same time, it needs to continue reducing such consumption given its emissions remain very high. That is why the ambitious goal was set for reducing them by 50% by the year 2030, taking 1992 as the base year. This would be an intermediate landmark on the way towards carbon neutrality by 2050.

The data come from the greenhouse gas emission inventories (GHG) that these cities publicly report to the C40, prepared with a basic level of GPC methodology (Global Protocol for Greenhouse Gas Emission Inventories). The methodology includes emissions arising from the consumption of energy from the domestic, trade and services, industrial and mobility sectors, as well as waste and waste-water treatment. Note that the GPC's basic-level data consider neither the Port nor the airport.

In 2020 Barcelona was part of the group of 88 leading cities in climate action and transparency, on the CDP's Cities A List – with an A classification –, a result that had already been achieved in the two previous years and which requires an emissions inventory to be made for the whole city that is constantly updated, the establishment of an emissions-reduction target, the publication of an action plan for the climate and completion of a climate-adaptation plan that shows how to tackle current and future climatic risks.

tCO₂-e per capita emissions. 2020

City	Country	Per capita emissions
Oslo	Norway	1.80
Barcelona	Spain*	1.80
Rijeka	Croatia*	2.36
Paris	France	2.50
Copenhagen	Denmark	2.60
Genoa	Italy*	2.93
Naples	Italy*	3.00
Madrid	Spain*	3.10
Bilbao	Spain*	3.17
Valencia	Spain*	3.57
Múrcia	Spain*	3.68
London	United Kingdom	3.80
Stockholm	Sweden	3.80
Nice	France*	4.00
Lisbon	Portugal*	4.02
Milan	Italy*	4.10
Basel	Switzerland*	4.21
Florence	Italy*	4.41
Athens	Greece	5.00
Warsaw	Poland	5.80
Amsterdam	The Netherlands	5.90
Heidelberg	Germany	6.20
Salonika	Greece*	6.56

NB: The original database has 188 cities but the table features only a sample of benchmark cities using the GPC framework for reporting their data. CDP is the only global dissemination system that enables companies, cities, states and regions to manage data on their environmental impact. Date of data extraction: December 2020*: 2018 data

*Data provided by the Barcelona Energy Agency.

Source: C40 Cities Climate Leadership Group and data from the Barcelona Energy Agency.

Development of the urban public-transport ecosystem in the world's cities, 2020

Barcelona, among the 20 with the best public-transport ecosystem



Barcelona as a city came 18th in the world and 9th in Europe in its public-transport ecosystem, according to the *Urban City Readiness Index 2020* prepared by the University of Berkeley and the Oliver Wyman Forum, in a ranking headed by Singapore and London. The study compared 50 global cities from various geographical regions that stood out for their mobility challenges and the solutions they applied, while being economic epicentres in their area of influence.

Barcelona dropped five places compared to the 2019 ranking, but was higher than Toronto and Los Angeles in overall scores and was very close to the results of Zurich, Seoul and Madrid, and had the same score as Sydney.

Position of Barcelona in assessment categories

Efficient system



Social impact



Innovation



Market attraction



Infrastructure



Global Index



Source: *Urban City Readiness Index 2020*. Berkeley University of California and the Oliver Wyman Forum.

The study highlighted five key factors for new mobility systems in cities: integration, accessibility, sustainability, innovation and public-private collaboration and established the criteria for preparing the rankings based on efficiency of the system, social impact, innovation, market attraction and infrastructures. As regards these categories, Barcelona came 2nd in efficiency of its system – thanks to its degree of traffic management and use of public transport–, 13th in infrastructure, 15th in market attraction, 26th in innovation and 29th in social impact – where airport traffic volume and public-transport prices were assessed

Cities with the world's best public-transport systems. 2020

Position	City	Global index
1	Singapore	74.1
2	London	74.0
3	Stockholm	73.2
4	Hong Kong	72.6
5	Amsterdam	72.5
6	Tokyo	72.4
7	Helsinki	71.9
8	Berlin	71.7
9	Paris	71.7
10	New York	70.8
11	San Francisco	70.7
12	Chicago	70.5
13	Boston	70.3
14	Zurich	67.8
15	Seoul	67.7
16	Madrid	66.7
17	Sydney	66.1
18	Barcelona	66.1
19	Toronto	65.4
20	Los Angeles	65.4

Source: *Urban City Readiness Index 2020*. Berkeley University of California and the Oliver Wyman Forum.



Labour market and training



Introduction

The 2020 economic crisis resulting from the pandemic is having a huge impact on the job markets of the main economies, with employment in the European Union down by 3% during the first six months of the year. The economies of Barcelona, Catalonia and Spain share this trend, reaching year-on-year falls in employment of between 2% and 3.5% in 2020. The crisis has been especially harsh to workers on temporary contracts, in sectors such as the hotel and restaurant industries and retail trade, and – on a regional level – to countries in the south and east of Europe. In any case – and in all the regions analysed – the loss of jobs is significant but clearly below the drop in GDP, thanks largely to the application of temporary lay-offs (ERTOs) and other public-policy measures.

Facing this situation, Barcelona City Council has launched the city's Economic Recovery Plan with 7 strategic goals, such as protecting jobs and promoting quality employment through specific measures aimed at leaving no one behind and at maintaining the city's business fabric, by preventing the mass destruction of businesses and boosting that fabric with greater added value. Notable adopted measures include a *re-skilling* technical and professional plan in strategic sectors (such as the digital economy, deployments of sectoral Employment Plans and Shock Employment Plans aimed at specially vulnerable groups, the creation of a supplementary allowance for self-employed individuals and subsidies for the digitisation of the city's businesses).

The employment indicators available on a regional scale and presented in this chapter refer to the year 2019, a period of moderate growth in economic activity in the EU which was also observed in the labour market and which saw all member states experience an improvement in employment rates. In the case of Catalonia, the job market showed a positive development: a year-on-year rise in employment, at the end of 2019, of more than 87,000 people and a year-on-year drop in unemployment of nearly 46,000 people, according to the *Active Population Survey* published by the National Institute of Statistics (INE). However, as the figures presented in the report show, the employment rate in the region is

below the European average while the unemployment rate is significantly above the EU average, despite having decreased since 2013.

The part-time employment rate in Catalonia was 14.6% in 2019, putting it 5.5 points below the EU average (20.1%) and at the same level as the Spanish average (14.6%). The female employment rate is higher in all cases, with a lower indicator in Catalonia, and a greater difference in relation to the rest of the territorial areas.

One of Barcelona's key assets is a significant critical mass of skilled human capital. In this area, it should be noted that in 2019, the percentage of the working population with a university education in Catalonia rose to 48.4% and, in the case of women, the figure was above 50% for the fifth time. These values are clearly above the European Union average. Barcelona is the 5th most attractive city in the world for digital talent wishing to work abroad, according to the report *Decoding Global Talent 2019* from the Boston Consulting Group, coming just behind London, New York, Berlin and Amsterdam.

Lastly, Barcelona continues to be a benchmark as a city of excellence for business training, as it is the only city in Europe with two teaching institutions (IESE and ESADE) among the ten best business schools on the continent, according to the *Financial Times*.

Barcelona,
among the five
most attractive cities
for digital talent

Attractiveness of cities around the world for digital talent 2019

Barcelona among the top five cities for attractiveness for work



According to *Decoding Digital Talent 2019* by the Boston Consulting Group, Barcelona is the 5th most attractive city in the world for digital experts who wish to work abroad, coming just above Dubai, Los Angeles and Paris. The ranking is led by London and New York, which also led the attractiveness table for global talent in 2018. In fact, the first nine cities are the same in both classifications, although Barcelona and Amsterdam swapped position from 4th to 5th places in the two rankings.

The study was based on the identification of digital talent – experts in data, programming and web development, digital marketing, digital design, developing mobile applications, artificial intelligence, robotics and automation – who answered the online *Global Talent Survey*. Over 26,000 people responded. The report shows that two thirds (67%) of digital experts would be willing to work in other countries, while in the report on global talent, this figure was only 57%. The aspects that digital experts value most in terms of employment are a good work-life balance and the opportunity to learn and receive training. The report also highlights that for public institutions, the priorities are the development of an attractive environment for workers in this field, detecting any digital talent gaps and fostering specialised technological training programmes in their territory.

Comparison of positioning of cities in labor attractiveness



Source: *Decoding Global Talent 2019*. BCG.

The world's most attractive cities for working abroad

2018 Ranking position global talent	City	2019 Ranking position Digital Experts
1	London	1
2	New York	2
3	Berlin	3
5	Amsterdam	4
4	Barcelona	5
6	Dubai	6
7	Los Angeles	7
8	Paris	8
9	Sydney	9
14	Abu Dhabi	10
10	Tokyo	11
12	Toronto	12
29	San Francisco	13
18	Zurich	14
15	Singapore	15
23	Munich	16
13	Vienna	17
20	Washington, DC	18
16	Melbourne	19
17	Brussels	20
11	Madrid	21
24	Vancouver	22
27	Boston	23
28	Stockholm	24
22	Geneva	25
25	Chicago	26
26	Hong Kong	27
19	Rome	28
–	Copenhagen	29
30	Montreal	30

Source: Decoding Global Talent 2019. BCG.

Employment rate in European regions in 2019

Catalonia's employment rate, close to the European Union's

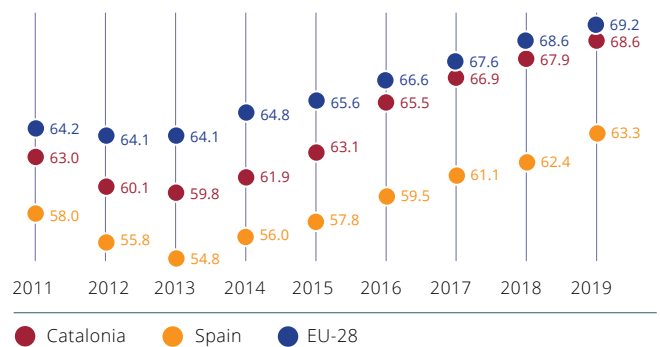


In 2019, the EU's employment rate grew by 0.6 percentage points compared to 2018, as a result of moderate increases in most of the regions analysed.

Along the same lines, the employment rate in Catalonia and Spain increased for the fifth consecutive year – by 0.7 and 0.9 percentage points respectively – with growth slightly above the EU average, although employment rates are still among the lowest on the continent owing to the sharp decrease experienced from 2008 to 2013. In fact, the employment rate in Catalonia was 68.6% in 2019, placing it below the European average for the ninth consecutive year, although it is much higher than the rate for Spain – (5.3% higher) – and is also above that of regions such as Milan, Paris and Brussels. On the other hand, the employment rate for women was also up by 1.2 points to 65% in Catalonia in 2019, placing it slightly above the European average (64.1%) and much higher than the Spanish average (57.9%) as well as that of regions such as Lombardy, although it still lags way behind the regions with the highest rates on the continent (where the figure is over 70%) and is also below the global employment rate.

In the 4th quarter of 2019, the employment rate stood at 73.1% in Barcelona, an increase of 2.2% compared to the same period in 2018. The city's employment rate for women (69.8%) is more than 5 per cent above the European average and is approaching the 70% threshold. In 2020, the year-on-year employment rate for Barcelona and for Catalonia dropped down to 69.1% and 67% – respectively – in the fourth quarter.

Employment rate (%)



Source: Eurostat.

Employment rate in European regions. 2019

Employment rate for women (%)	Region (CITY)	Employment rate (%)
77.4	Upper Bavaria (MUNICH)	81.2
78.8	Stockholm (STOCKHOLM)	79.5
74.7	Stuttgart (STUTTGAUT)	79.5
72.0	Prague (PRAGUE)	79.3
75.3	North Holland (AMSTERDAM)	78.8
75.5	Oslo (OSLO)	77.6
74.7	Denmark (COPENHAGEN)	76.8
72.3	South Holland (ROTTERDAM)	76.8
71.8	Darmstadt (FRANKFURT)	76.3
72.6	East Scotland (EDINBURGH)	75.9
73.5	Southern Finland (HELSINKI)	75.3
71.8	Berlin (BERLIN)	74.9
68.3	London (LONDON)	74.1
67.5	Central Hungary (BUDAPEST)	74.0
72.5	Lithuania (VILNIUS)	73.0
68.1	Greater Manchester (MANCHESTER)	72.9
67.0	Mazowsze (WARSAW)	72.6
69.8	Lisbon (LISBON)	71.8
65.9	Middle and East (DUBLIN)	71.3
65.6	Rhône-Alpes (LYON)	69.1
65.2	Community of Madrid (MADRID)	69.0
65.0	Catalonia (BARCELONA)	68.6
64.1	EUROPEAN UNION	69.2
60.4	Lombardy (MILAN)	68.4
65.1	Île-de-France (PARIS)	68.0
64.5	Basque Country (BILBAO)	67.3
63.2	Vienna (VIENNA)	67.1
57.9	Spain	63.3
53.6	Laci (ROME)	61.2
56.3	Languedoc-Roussillon (MONTPELLIER)	59.8
51.8	Brussels (BRUSSELS)	56.9

NB: active population aged 15 to 64.

The original database contains around 450 regions but the table only shows a selection of benchmark regions.

Source: Eurostat

Part-time employment rate in European regions in 2019

Part-time employment rates in Catalonia are below the European average

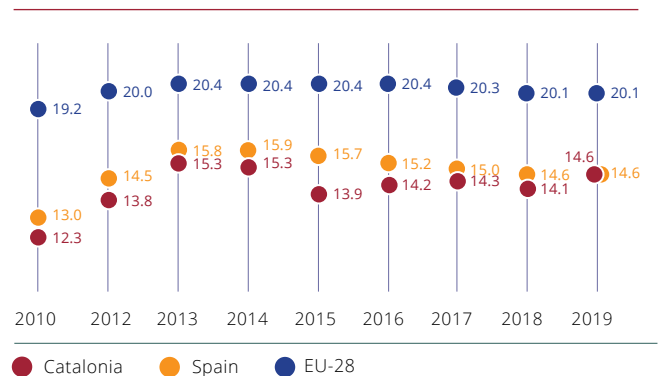


In Catalonia the part-time employment rate, which measures the weighting of people working part-time out of the total working population, stood at 14.6% in 2019, placing it 5.5 points below the EU average (20.1%), at the same level as the Spanish average (14.6%) and far below the regions with the highest rates (Holland, Austria, Germany and Denmark), although it is above the regions of Madrid, Lisbon and various Eastern European cities. As regards the part-time employment rate for women (which in all the regions analysed is higher than the figure for men, and the overall total), in Catalonia this stands at 22.5%, which is 9.5% below the EU average (32%), 1.3 points below the rate for Spain (23.8%) and once again, far below the regions of the top countries in the ranking (Holland, Austria, Germany and Denmark) where the rate of voluntary part-time work among women is much higher.

As for the development over time of the part-time employment rate since the start of the last crisis, it rose significantly in the European Union, Spain and Catalonia between 2007 and 2013, while it became quite stable from 2013 onwards – albeit with a slightly downward trend – and rose moderately in Catalonia in 2019. Note that part-time work is one of the forms of work adopted as the job market has become more flexible, and in most European countries it has also involved an increase in the percentage of non-voluntary part-time work. In 2018, this affected a quarter of part-time workers in the European Union.

As for Barcelona, 2019 saw a total part-time employment rate of 12.7%, below the figures for Catalonia, Spain and the European Union. In the case of women, the city rate (15.8%) is more than 6 percentage points below the Catalan figure, which means it is also below the percentage for Spain as a whole and that of the EU.

Part-time employment rate in European regions. (%)



Source: Eurostat

Part-time employment rate in European regions. 2019

Part-time employment rate for women (%)	Region (CITY)	Part-time employment rate (%)
70.7	North Holland (AMSTERDAM)	50.3
72.9	South Holland (ROTTERDAM)	49.5
41.5	Vienna (VIENNA)	28.7
46.8	Darmstadt (FRANKFURT)	28.6
49.0	Stuttgart (STUTTGART)	27.8
36.6	Berlin (BERLIN)	27.4
41.7	East Scotland (EDINBURGH)	26.5
44.5	Upper Bavaria (MUNICH)	26.2
33.0	Denmark (COPENHAGEN)	25.3
35.8	Greater Manchester (MANCHESTER)	23.0
30.9	Oslo (OSLO)	22.7
33.6	London (LONDON)	22.1
33.0	Brussels (BRUSSELS)	22.0
27.9	Stockholm (STOCKHOLM)	21.7
33.6	Rhône-Alpes (LYON)	20.8
32.4	Languedoc-Roussillon (MONTPELLIER)	20.5
32.0	EUROPEAN UNION	20.1
32.5	Laci (ROME)	19.8
29.9	Middle and East (DUBLIN)	19.3
28.7	Provence-Alps-Cote d'Azur (MARSEILLE)	18.8
32.5	Lombardy (MILAN)	18.3
27.2	Basque Country (BILBAO)	16.7
20.0	Southern Finland (HELSINKI)	16.0
26.0	Community of Valencia (VALENCIA)	16.0
23.8	Spain	14.6
22.5	Catalonia (BARCELONA)	14.6
20.6	Île-de-France (PARIS)	14.0
19.9	Community of Madrid (MADRID)	13.2
16.1	Bucharest – Ilfov (BUCHAREST)	12.7
17.6	Prague (PRAGUE)	12.1
12.6	Lisbon (LISBON)	9.7
11.9	Latvia (RIGA)	9.2
10.9	Warszawski (WARSAW)	8.8
9.3	Lithuania (VILNIUS)	7.5

Source: Eurostat

Unemployment rate in European regions in 2019

The rate of unemployment in Catalonia has fallen, but is still much higher than the European average

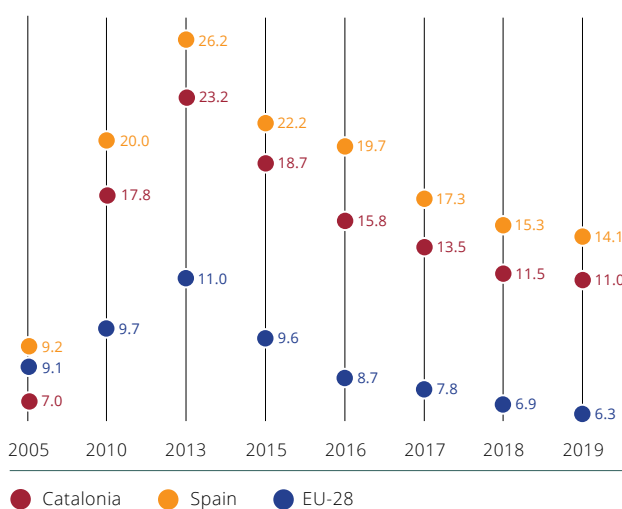


The EU's economic growth in 2019 meant it closed the year with an unemployment rate of 6.3%, in other words, 0.6% lower than it was in 2018. Unemployment was still being felt more acutely in the territories of southern Europe, such as Spain and Catalonia, although the overall Spanish State's differential with regard to the European average decreased compared to 2018, with an annual fall of 1.2 percent.

The average annual unemployment rate in Catalonia was 11% in 2019, putting it 4.7% above the European average and still far higher than in the main benchmark regions, despite remaining below the Spanish average (14.1%). At the same time, the unemployment rate for women was 11.5%, which is 0.6 points lower than in 2018, although it is above the overall average.

In the fourth quarter of 2020, the unemployment rate in Barcelona has reached a value of 12.6%, after an increase as a consequence of the pandemic that moves it away from the EU average. Note that both in the city and the benchmark regional areas, the application of temporary lay-offs (ERTOs) and other public-policy measures have kept the rise in unemployment at a moderate level given the intensity of the crisis.

Taxa d'atur (%)



Source: Eurostat

Unemployment rate in European regions. 2019

Unemployment rate for women (%)	Region (CITY)	Unemployment rate (%)
1.5	Prague (PRAGUE)	1.3
1.8	Upper Bavaria (MUNICH)	1.9
2.0	Stuttgart (STUTT GART)	2.4
2.9	Darmstadt (FRANKFURT)	3.1
2.9	North Holland (AMSTERDAM)	3.1
3.3	East Scotland (EDINBURGH)	3.4
3.2	Hamburg (HAMBURG)	3.6
4.2	South Holland (ROTTERDAM)	4.0
4.0	London (LONDON)	4.3
4.8	Estonia (TALLINN)	4.4
4.5	East and Centre (Dublin)	4.7
5.2	Greater Manchester (MANCHESTER)	5.1
5.2	Denmark (COPENHAGEN)	5.1
4.8	Berlin (BERLIN)	5.3
6.0	Stockholm (STOCKHOLM)	6.1
5.5	Lithuania (VILNIUS)	6.3
6.6	EUROPEAN UNION	6.3
6.3	Southern Finland (HELSINKI)	6.4
7.3	Rhône-Alpes (LYON)	7.0
7.9	Lisbon (LISBON)	7.1
7.6	Île-de-France (PARIS)	8.1
7.7	Provence-Alps-Cote d'Azur (MARSEILLE)	8.7
9.4	Basque Country (BILBAO)	9.2
8.3	Vienna (VIENNA)	9.3
10.4	Laci (ROME)	9.9
10.5	Languedoc-Roussillon (MONTPELLIER)	10.3
11.5	Community of Madrid (MADRID)	10.6
11.5	Catalonia (BARCELONA)	11.0
12.5	Brussels (BRUSSELS)	12.6
16.0	Spain	14.1
19.8	Ankara (ANKARA)	14.2

NB: Population over 15 years.

The original database contains about 450 regions, although the table collects only a selected sample.

Source: Eurostat

Working population with a university education in European regions in 2019

More than half of women workers in Catalonia have a university education



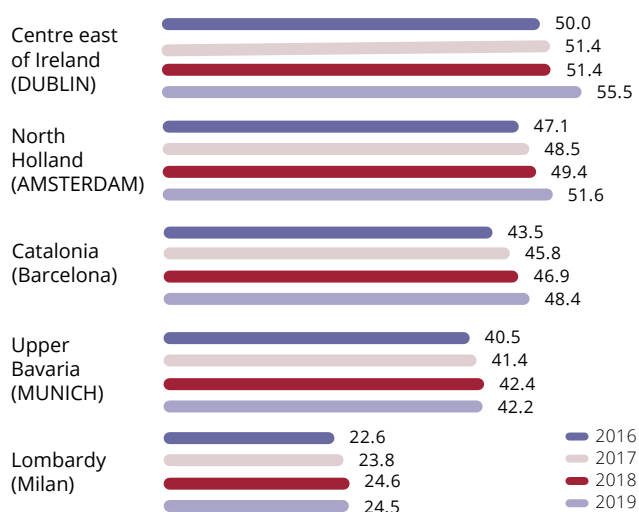
According to Eurostat figures for 2019, 48.4% of the working population in Catalonia had a university degree, representing an increase of 1.5% on the previous year. This was much higher than the EU average (37.7%) and also above benchmark regions such as Munich, Manchester and Berlin, as well as being above the average for Spain (44.8%).

The percentage of Catalan women workers with a university education was above 50% for the fifth year running, standing at 53.6%, up by 1.5 per cent on 2018. This indicator – yet again above the global one – remains well above the EU value (42.2%) and higher too than the benchmark European regions mentioned above and the Spanish average (50.6%).

These results highlight the progressive increase in the number of people with higher education qualifications in Catalonia in recent years, which we need to continue working on in order to reach the standards of the workforces in northern European regions.

Working population with a university degree

(% out of total employed population)



Source: Eurostat

Working population with a university education in European regions. 2019

Workers with a university degree (%)	Region (CITY)	Working population with a university degree (%)
65.5	London (LONDON)	64.1
64.3	Oslo og Akershus (OSLO)	58.6
61.4	Basque Country (BILBAO)	58.1
62.8	Brussels Region - capital (BRUSSELS)	57.7
64.7	Southern Finland (HELSINKI)	57.6
59.0	Île-de-France (PARIS)	56.2
59.1	East and Centre (DUBLIN)	55.5
61.1	Stockholm (STOCKHOLM)	55.4
58.9	Capital (COPENHAGEN)	54.3
56.6	Madrid (Regional Community of) (MADRID)	53.6
58.7	Scotland	53.5
55.0	North Holland (AMSTERDAM)	51.6
54.6	Central Hungary (BUDAPEST)	50.5
57.3	Lithuania (VILNIUS)	48.9
53.6	Catalonia	48.4
51.2	Vienna (AT) (VIENNA)	48.3
53.0	Attica (ATHENS)	47.7
49.6	Berlin (BERLIN)	47.3
51.2	Bucharest - Ilfov (BUCHAREST)	46.9
46.0	Prague (PRAGUE)	46.2
50.1	Greater Manchester (MANCHESTER)	45.9
50.6	Spain	44.8
46.9	South Holland (THE HAGUE)	44.5
50.5	South-west Bulgaria (BG) (SOFIA)	43.3
38.3	Upper Bavaria (MUNICH)	42.2
48.3	Community of Valencia (VALENCIA)	41.5
50.0	Latvia (RIGA)	40.3
41.8	West Midlands (BIRMINGHAM)	39.3
42.9	Lisbon (LISBON)	38.7
35.2	Darmstadt (FRANKFURT AM MAIN)	38.0
42.2	EUROPEAN UNION	37.7
31.5	Stuttgart (STUTTGART)	36.4

NB: % of the population aged between 25 and 64 with a university degree. The original database contains around 450 regions but the table only shows a selection of benchmark regions.

Source: Eurostat

Best European business schools in 2020

Barcelona is the only city with two educational institutions among Europe's top 10 MBA business schools

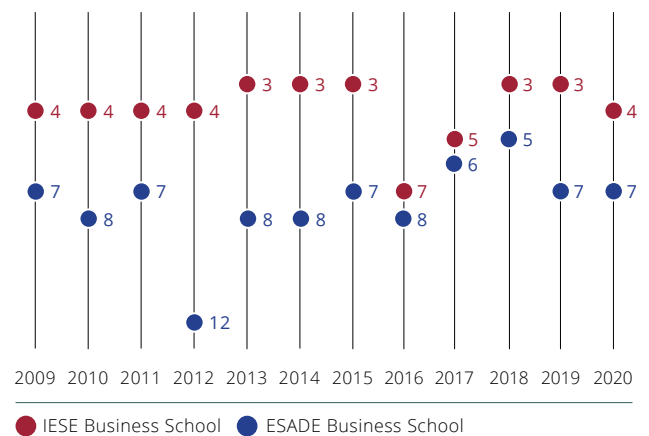


According to the *Financial Times* ranking of the top 100 full-time MBA programmes, which it has been compiling for the last nineteen years, Barcelona's IESE and ESADE business schools are ranked 4th and 7th in the European ranking, above such well-known schools as the SDA Bocconi in Milan and the Warwick Business School. This means that Barcelona is the only city with two educational institutions among the top 10 European MBA business schools in 2019, for the eighth year running. Furthermore, these two institutions are among the top twenty-five schools worldwide, with the IESE in 13th place and ESADE coming 24th. In relation to the previous year's results, the IESE dropped by one place and the ESADE dropped by three in the world ranking and the IESE dropped by one place and the ESADE kept its place in the European ranking.

Likewise, according to the 2019 edition of the full-time MBA ranking Which MBA? published annually by The Economist Intelligence Unit for the last eighteen years, the IESE came first in the world ranking.

Year after year these indicators consolidate Barcelona's position as a city of excellence and as a pole of attraction for business training on the international stage.

Positioning in the European ranking



Source: Global MBA Ranking, Financial Times.

Best European business schools. 2019

European ranking	Business school	City	World ranking
1	Insead	Fontainebleau	4
2	London Business School	London	7
3	HEC Paris	Paris	9
4	Iese Business School	Barcelona	13
5	University of Cambridge: Judge	Cambridge	19
6	University of Oxford: Saïd	Oxford	21
7	Esade Business School	Barcelona	24
8	IMD	Lausanne	25
9	SDA Bocconi	Milan	29
10	Warwick Business School	Coventry	43
11	Alliance Manchester Business School	Manchester	45
12	City, University of London: Cass	London	50
13	IE Business School	Madrid	52
14	Imperial College Business School	London	55
15	Durham University Business School	Durham	62
16	WHU Beisheim	Düsseldorf	64
17	Rotterdam School of Management, Erasmus University	Rotterdam	66
18	University of St Gallen	St Gallen	68
19	Mannheim Business School	Mannheim	71
20	EM Lyon Business School	Lyon	79
21	ESMT - European School of Management and Technology	Berlin	81
22	The Lisbon MBA	Lisbon	84
23	Edhec Business School	Lille	88
24	Essec Business School	Paris	88
25	University of Edinburgh Business School	Edinburgh	95
26	University College Dublin: Smurfit	Dublin	99

Source: Global MBA Ranking 2020. Financial Times.

The first part of the paper discusses the importance of understanding the cultural context of the research. It highlights the need for researchers to be sensitive to the values and beliefs of the communities they are studying. This is particularly important in the field of education, where cultural differences can significantly impact learning outcomes.

The second part of the paper focuses on the methodology used in the study. It describes the process of selecting participants, collecting data, and analyzing the results. The authors emphasize the importance of using a mixed-methods approach to gain a comprehensive understanding of the research topic.

The third part of the paper presents the findings of the study. It discusses the results of the quantitative data analysis and the insights gained from the qualitative interviews. The authors conclude that there are significant differences in learning outcomes between the two groups, and these differences can be attributed to cultural factors.

The final part of the paper discusses the implications of the findings for future research and practice. It suggests that educators should be aware of the cultural context of their students and tailor their teaching methods accordingly. The authors also recommend further research to explore the underlying reasons for the observed differences.





Introduction

Barcelona has consolidated its position at the forefront of European cities as a pole of attraction for tech entrepreneurs and is an international benchmark in the use of technologies as a means of developing smart city management. Various recent rankings put Catalonia's capital in leading positions and in many cases it has managed to maintain or improve its position despite the situation generated by the pandemic, demonstrating its resilience in this field.

For example, Barcelona is still the 5th start-up hub in Europe in 2020, according to the EU-Startups classification, and the 5th for operations carried out, according to *The State of European Tech 2020* produced by the Atomico consultancy firm, which puts it in 16th place for investment received. Barcelona's position as an emerging hub for tech start-ups is reinforced by organising major tech events, such as the Mobile World Congress and Smart City Expo, as well as the launch of projects to keep the synergies between start-ups alive, for example, the 'Start-up Catalonia' initiative. Thus, the Catalan capital is in 27th position for the best emerging tech company ecosystem in the world in 2020 according to the *StartupBlink Ecosystem Ranking*, while *The Global Startup Ecosystem Report 2020* by Startup Genome ranks it as the 6th emerging ecosystem in the world and the 3rd in Europe. In fact, according to the *Startup Heatmap Europe Report 2019*, for the third year running, Barcelona is the 3rd most popular city for establishing a start-up, out of more than 100 European cities studied. According to the European Commission, Barcelona is also the 7th city in Europe with regard to the number of scale-ups and it is among the top four non-capital European cities with the highest number of tech entrepreneur companies in their respective countries. Barcelona registered nearly 50% of all Spanish technological scale-ups and 60% of the increase in capital invested in Spain in 2019.

The city's consolidation as an emerging hub for technological entrepreneurship and recent trends in the economy are turning the digital sector into one of the city's economic drivers which, after experiencing very dynamic growth between 2011 and 2019, continues to create employment in 2020 and is playing a key role in the transformation of the production model, speeded up by the pandemic. According to the report *Barcelona Digital Talent 2020*, the digital sector accounts for 13% of city job offers, while 26% of the professionals it employs in

Barcelona are women and 31% come from other cities. One of the goals of Barcelona City Council's economic agenda over the coming years is to promote the city as a digital training hub and to promote the digital transformation of specific sectors such as the retail trade, with the strategic objective of turning Barcelona into the digital and tech capital of Europe.

In regard to innovation, Barcelona is ranked as the 4th most innovative city in Europe for the first time, only behind London, Paris and Berlin, and 21st out of 500 cities around the world, according to 2thinknow's *Innovation Cities Index 2019*.

In terms of talent, the Catalan job market is characterised by its rich fabric in added-value sectors. In 2019, Catalonia was once again the 4th European region where most people with higher education work in the field of science and technology (944,000) after year-on-year growth in this group of 7.8%, although it has gone down one position to 5th among the regions with the most people working in manufacturing with a high or medium-high technological intensity, and two positions to 9th as regards employment in services with high levels of knowledge and cutting-edge technology. Nearly a third of those employed in these activities are women.

In the field of science, the city is ranked as the 5th European city – 23rd worldwide – in scientific academic production, according to the Knowledge Cities Ranking 2019, produced by the UPC's Land Policy and Valuations Centre, while it is 40th out of the world's 200 main scientific cities according to the 2020 index drawn up by *Nature* magazine. Barcelona is also the first city in the world to carry out a comprehensive diplomatic strategy in science and technology, by means of the public-private platform Scitech Diplohub, and it is committed to being an influential global player in terms of tackling humanity's big challenges through science and technology.

Barcelona maintains its position as the 5th start-up hub in Europe

Main start-up hubs in Europe in 2020

Barcelona maintains its position as the 5th start-up hub in Europe



Barcelona has retained its position as Europe's 5th start-up hub in 2020 according to the classification of *EU-Startups*, a digital magazine that has classified the European cities that create the most start-ups and obtain the most funding. The first four positions in the ranking – London, Berlin, Paris and Amsterdam – are also unchanged. Barcelona is the first Spanish city in the ranking and is only accompanied by Madrid, which has slipped back from 6th to 7th place. Valencia is just outside the top 30 European hubs. EU-Startups takes three variables into account in drawing up the ranking: the 150 cities that most visit its website, the number of emerging companies created in the previous three years and the funding recorded in those cities in the previous 12 months. Each of these variables is given a set weighting to obtain the final classification.

At the same time, and according to various reports, Barcelona's start-up ecosystem has consolidated itself and shown ongoing growth, as a result of a high number of investment opportunities, talented professionals, innovation centres, coworking spaces, start-ups and inventive programmes. So, according to the *StartupBlink Ecosystem Ranking*, for the second year running, Barcelona is 27th among the cities with the best ecosystem of emerging tech firms in the world.

The top 15 start-up hubs in Europe

Ranking	City	Country
1	London	United Kingdom
2	Berlin	Germany
3	Paris	France
4	Amsterdam	Netherlands
5	Barcelona	Espanya
6	Munich	Germany
7	Madrid	Spain
8	Stockholm	Sweden
9	Dublin	Ireland
10	Milan	Italy
11	Copenhagen	Denmark
12	Tallinn	Estonia
13	Zurich	Swiss
14	Helsinki	Finland
15	Hamburg	Germany

Source: Europe's biggest startup hubs in 2020. EU-startups.

The top 10 start-up hubs in Europe

Ranking 2020	Ranking 2018
London ①	① London
Berlin ②	② Berlin
Paris ③	③ Paris
Amsterdam ④	④ Amsterdam
Barcelona ⑤	⑤ Barcelona
Munich ⑥	⑥ Madrid
Madrid ⑦	⑦ Stockholm
Stockholm ⑧	⑧ Dublin
Dublin ⑨	⑨ Copenhagen
Milan ⑩	⑩ Munich

Source: Europe's biggest startup hubs in 2020. EU-startups.

Most popular European cities for establishing a start-up in 2019

For the third year running, Barcelona is the third most popular city for establishing a start-up



According to the fourth edition of *Startup Heatmap Europe Report 2019*, 18% of start-up founders and members of the technology community would choose Barcelona if they had to embark on a new business project tomorrow, which means that the city retains 3rd place out of 100 European cities for the third year running. The ranking is led by London – where 37% of the people surveyed would begin a business activity tomorrow – followed by Berlin in 2nd place with 34%. Although these two cities have retained the top places, they have lost 13 and 17 points, respectively, in the last four years. In comparison with the first edition, Barcelona's position has not changed, but the number of votes has. In 2016, 7% of start-up founders would have chosen the city, a figure that rose to 20% in 2018, before falling back to 18% in the latest edition. The city continues to lead the ranking for eCommerce start-ups by a wide margin. These three cities, together with the next three below them in the ranking (Paris, Amsterdam and Lisbon), form the core of the European start-up scene, known as the Circle Line. This circle is where most entrepreneur activities and opportunities occur in Europe, as these six hubs account for 75.3% of all the start-up founders in Europe in 2019.

Preferred cities to locate a new start-up in Europe

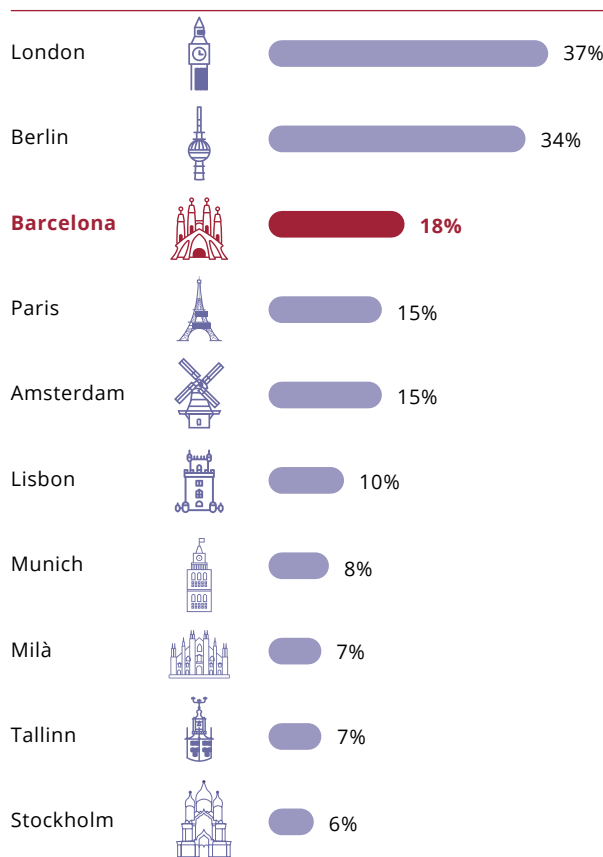
Ranking 2018	City	Ranking 2019
1	London	1
2	Berlin	2
3	Barcelona	3
4	Paris	4
6	Amsterdam	5
5	Lisbon	6
7	Munich	7
8	Milan	8
...	Tallinn	9
...	Stockholm	10

Source: Startup Heatmap Europe.

At the same time, according to *The State of European Tech 2020*, a report drawn up by the British investment firm Atomico, Barcelona is the 5th start-up hub in Europe for the number of operations carried out, just behind London, Paris, Berlin and Amsterdam, and the 16th hub in investment received with annualised data from September 2020.

Percentage of enterprising people who cite the city to locate a new start-up

(with a maximum of 3 votes per entrepreneur)



Source: StartUp Heatmap Europe, 2019 StartUp Heatmap Report.

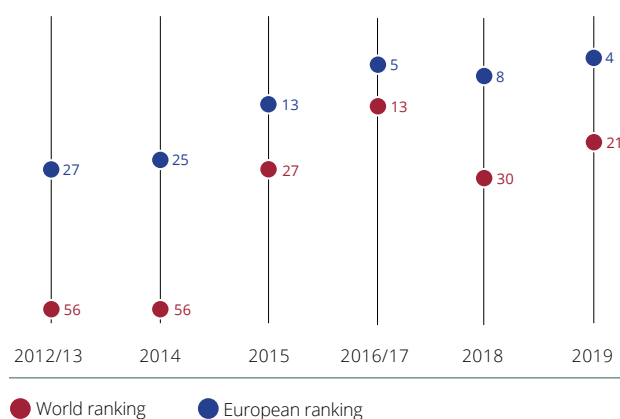
Innovation in cities around the world in 2019

Barcelona is the 4th most innovative city in Europe and 21st in the world



According to the 12th edition of the *Innovation Cities Index*, Barcelona is placed as the 4th European city (only behind London, Paris and Berlin) and the 21st world city for innovation, out of the 500 cities analysed by the consultancy firm 2thinknow in 2019. In a world ranking headed by New York, Tokyo and London, Barcelona has risen nine places compared to last year, passing four European cities (Amsterdam, Vienna, Munich and Stockholm), two American cities (San Diego and Austin), the Canadian cities of Montreal and Vancouver, and Hong Kong. The city is notable for having climbed up to the top positions in just a few years. Although it suffered a major regression last year, due to the notable improvement of various North American cities, the rising trend has returned in 2019, with Barcelona achieving its best result in the European ranking and its second-best result in the international ranking since 2012 (when the available results began). The index classifies the cities into four categories of innovation, according to their scores for 162 indicators that measure the conditions conducive to creating innovation in cities. Barcelona is in Nexus, the top category, along with 59 other cities. That is followed by the categories Hub, Node and Upstart. These 162 indicators are grouped into 31 segments that cover all the economic, industrial and social functions of an economy, which are then summarised into three factors: cultural, human infrastructure and interconnected markets.

Position of Barcelona



Source: *Innovation Cities™ Index*. 2thinknow.

Innovation cities Index

City	World ranking 2019	City	European ranking 2019
New York	1	London	1
Tòquio	2	Paris	2
Londres	3	Berlin	3
Los Angeles	4	Barcelona	4
Singapur	5	Vienna	5
Paris	6	Munich	6
Chicago	7	Madrid	7
Boston	8	Milan	8
San Francisco - San José	9	Amsterdam	9
Toronto	10	Stockholm	10
Melbourne	11	Moscow	11
Berlín	12	Oslo	12
Dallas-Fort Worth	13	Istanbul	13
Seül	14	Rome	14
Sydney	15	Hamburg	15
Seattle	16	Copenhagen	16
Houston	17	Dublin	17
Atlanta	18	Manchester	18
Washington DC	19	Helsinki	19
Miami	20	Prague	20
Barcelona	21	Zurich	21
Mont-real	22	Frankfurt	22
San Diego	23	Brussels	23
Filadèlfia	24	Lyon	24
Viena	25	Düsseldorf	25
Pequín	26	Athens	26
Munic	27	Budapest	27
Madrid	28	Stuttgart	28
Milà	29	Rotterdam	29
Amsterdam	30	Cologne	30

Source: 2thinknow Innovation Cities™ Index 2019.

Top cities in the world for scientific academic production in 2019

Barcelona is 23rd among the world's cities and 5th in Europe

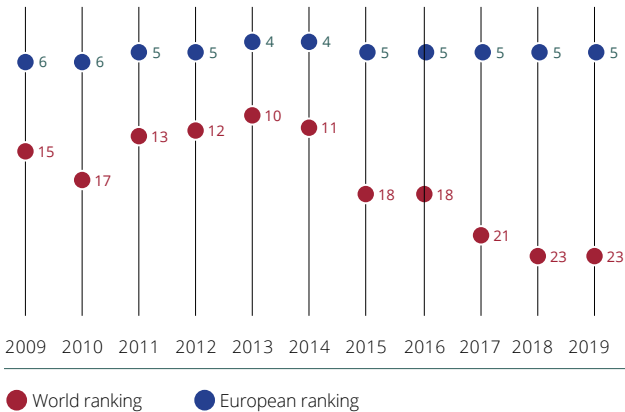


With 21,833 scientific publications, Barcelona is the 5th European city and the 23rd in the world in terms of scientific academic production, according to *Knowledge Cities Ranking 2019*, compiled by the UPC's Land Policy and Valuations Centre, based on the *Science Citation Index*. The city increased its number of publications by 11.1% compared with the previous year, enabling it to retain 5th place in the European ranking and 23rd in the world ranking. There were more scientific publications in Barcelona than in cities such as Berlin, Hong Kong, Milan or Cambridge (USA) although it is still a long way behind the top cities in the ranking (Beijing, Shanghai and London, which have occupied the top three positions since 2014).

Meanwhile, Barcelona is ranked 40th among the 200 main science cities in the world, according to the index compiled by Nature magazine. Furthermore, of the 408 Advanced Grants awarded to researchers by the European Research Council in 2019, 10 were for Catalan institutions, accounting for half of the grants given to Spain (20). Since the beginning of the European Research Council's campaigns in 2007 and up to 2019, Catalonia's network of universities and research centres has attracted 355 grants, representing 3.2% of those awarded in the European Research Area.

Positioning of Barcelona in scientific production

(Barcelona's position in the world and European rankings)



*Provisional data (October 2019).

Source: UPC - Land Policy and Valuations Centre (CPSV). Data november 2020

Major cities in the world in terms of scientific academic production. 2019

World ranking 2018	City	World ranking 2019	European ranking 2019	Publications 2019
1	Beijing	1		115,587
3	Shanghai	2		56,751
2	London	3	1	53,592
6	Nanjing	4		45,264
4	New York	5		44,485
5	Boston	6		41,949
7	Seoul	7		40,017
10	Guangzhou	8		37,648
8	Tokyo	9		37,237
9	Paris	10	2	36,761
11	Wuhan	11		33,733
12	Xi'an	12		31,565
18	Chengdu	13		26,065
13	Madrid	14	3	25,661
24	Hangzhou	15		25,015
14	Moscow	16	4	24,797
16	Chicago	17		22,891
17	Philadelphia	18		22,452
20	Toronto	19		22,383
21	Baltimore	20		21,887
25	Melbourne	21		21,846
19	Houston	22		21,841
23	Barcelona	23	5	21,833
15	Cambridge (USA)	24		21,657
22	Los Angeles	25		21,542
26	São Paulo	26		20,617
27	Rome	27	6	20,484
28	Milan	28	7	19,538
29	Hong Kong	29		19,211
30	Singapore	30		18,073
31	Berlin	31	8	17,860

NB: Data extracted in November 2020.

Source: Universitat Politècnica de Catalunya-Centre de Política de Sòl i Valoracions. <http://www-cpsv.upc.es/KnowledgeCitiesRanking/>

Population employed in technological manufacturing and services in European regions in 2019

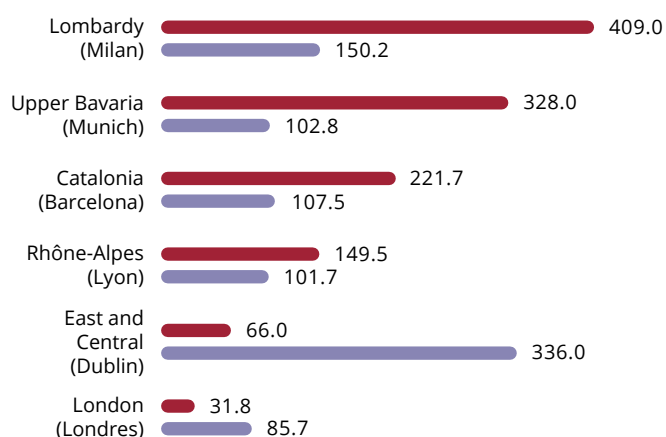
Catalonia, 5th European region in terms of the population employed in manufacturing and 9th in technological services



In 2019, Catalonia remained in 5th place among the European regions with the most people employed in high and medium-high technological manufacturing, only superseded by the Stuttgart, Lombardy, Upper Bavaria and Istanbul regions. With a total of 221,700 people working in these sectors, according to Eurostat, the number of jobs in these activities fell by 8,400 in Catalonia (3.7% less than the previous year) which puts it below the Istanbul region. Nearly a third of this employed population was women (70,600), practically an identical figure to the previous year's (-0.1%). Catalonia has a relative employment weighting of 6.4% in high and medium-high technology manufacturing sectors, a percentage that puts it in the medium-high band among the 300+ European regions.

Catalonia also occupied 9th place among the European regions for employment in knowledge and high tech intensive services, with a total of 107,500 employees in 2019. Compared with the previous year, employment figures in these areas suffered a slight fall of 6,500 (-5.7%), causing Catalonia to drop two places among European regions. Furthermore, the weighting of these activities in the overall employed population is 3.1% (compared to 3.4% the previous year), placing the region in the medium-high band of European regions. The female population employed in these activities increased by 2,400 (+7.8%) compared to 2018, making 33,100 women in all (31% of the total). With the Social Security figures, the weight of these sectors in all jobs in Barcelona was 8.4% in September 2020 and, despite the effects of the pandemic on the job market, Social Security registration in these sectors is practically unaltered (-0.1% compared to September 2019) while there has been a fall of 3.1% in the economy as a whole.

People employed in knowledge-intensive and high-technology services and people employed in high and medium-high technology intensity manufacturing. 2019



— People employed in high and medium-high technological manufacturing (in thousands).
— People employed in knowledge-intensive and high-technology services (in thousands).

Source: Eurostat

Population employed in technology manufacturing and technology services in the European regions. 2019

Knowledge-intensive and high technology services				High and medium-high technology manufacturing			
% People employed / total employed population	Employed women (thousands)	Total people employed (thousands)	Region (CITY)	% People employed / total employed population	Employed women (thousands)	Total people employed (thousands)	
2.5	18	57.3	Stuttgart (STUTT GART)	19.5	105	440.2	
3.4	46	150.2	Lombardy (MILAN)	9.2	113	409.0	
4.0	36	102.8	Upper Bavaria (MUNICH)	12.7	82	328.0	
1.8	22	103.7	Istanbul (ISTANBUL)	4.4	57	252.8	
3.1	33	107.5	Catalonia (BARCELONA)	6.4	71	221.7	
2.3	14	45.8	Emilia-Romagna (BOLOGNA)	10.6	53	214.8	
2.9	17	52.3	Piemont (TURIN)	11.7	58	213.6	
3.7	19	55.9	Karlsruhe (KARLSRUHE)	14.0	49	209.3	
2.3	6	22.6	Tübingen (TÜBINGEN)	18.0	44	180.9	
2.3	16	56.1	Dusseldorf (DUSSELDORF)	7.1	42	176.5	
6.9	130	377.1	Île-de-France (PARIS)	3.1	51	170.3	
0.6	2	8.5	Bursa, Eskişehir, Bilecik	11.4	29	165.6	
3.7	27	77.0	Darmstadt (FRANKFURT)	7.7	42	158.7	
2.2	10	41.4	Upper Silesia (KATOWICE)	8.3	55	155.3	
3.7	28	81.8	Cologne (COLOGNE)	6.9	35	152.8	
3.5	32	101.7	Rhône-Alpes (LYON)	5.2	43	149.5	
5.0	43	126.8	Masovia (WARSAW)	4.1	40	104.1	
7.1	73	220.6	Community of Madrid (MADRID)	3.0	29	91.6	
3.7	17	57.5	Pays de la Loire (NANTES)	5.8	27	90.4	
6.7	25	98.5	Hongria central (BUDAPEST)	6.0	34	87.4	
5.0	21	63.9	Midi-Pyrénées (TOULOUSE)	5.9	14	75.5	
5.8	42	108.5	Berlin (BERLIN)	3.9	21	72.3	
9.4	35	120.9	Berkshire, Buckinghamshire and Oxfordshire (OXFORD)	5.5	23	71.0	
7.2	98	336.0	London (LONDON)	1.4	29	66.0	
5.9	44	140.4	Lazio (ROME)	2.7	15	65.3	
4.1	13	39.6	Hamburg (HAMBURG)	6.7	16	65.1	
3.9	9	50.8	Gloucestershire, Wiltshire and North Somerset	4.5	10	58.6	
3.2	19	61.3	Provence-Alps-Cote d'Azur (MARSEILLE)	2.9	16	55.8	
4.6	17	57.9	East Anglia (EAST ANGLIA)	4.1	11	51.4	
5.0	17	72.5	Surrey, East Sussex and West Sussex (BRIGHTON)	3.3	15	47.8	
6.4	16	61.3	Capital Region (COPENHAGEN)	4.3	18	41.1	

NB: The original database contains a total of nearly 300 European regions, although the table collects the top 10 in the subject and the remaining 20 is a selected sample of regions of interest.

Source: Eurostat

Population employed in science and technology in 2019, and research and development expenditure in European regions in 2018

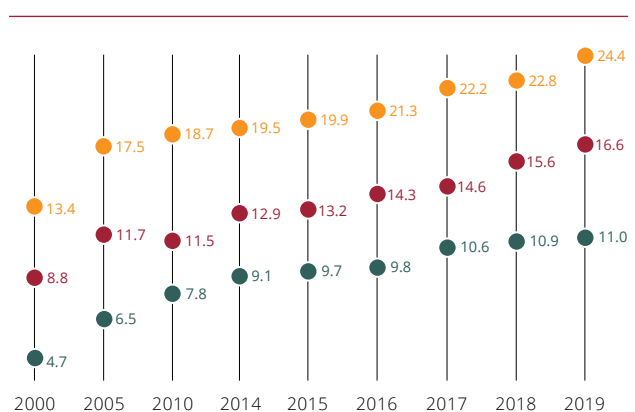
Catalonia, 4th European region for employment in science and technology



Catalonia registered 943,500 workers with higher education employed in science and technology in 2019, which meant it retained 4th place in the ranking of European regions, only behind the regions of Paris, Madrid and Istanbul, and above those of Lyon, Milan, Warsaw, Munich and Berlin, among others, according to Eurostat. Compared with the previous year, the number of people employed in this sector in Catalonia has increased by 68,200 (7.8%). The weighting of the employed population in science and technology in the overall population of Catalonia is 16.6% (1 point higher than in 2018), a percentage that places the region in the medium-high band among the 300+ European regions.

In 2018, intensity in research and development (R&D) in Catalonia was 1.54% of GDP, a percentage that surpassed regions like London and Lombardy, as well as the average for Spain (1.24%). However, Catalonia is still a long way behind leading European areas like Upper Bavaria, Stuttgart and Stockholm, and below both the European average (2.18%) and the target of 3% set by the European 2020 strategy. According to INE data, in 2019 total expenditure on R&D was 1.52% of GDP in Catalonia and 1.25%, for Spain as a whole.

Population employed in science and technology
(As a percentage of the total population*)



● Catalonia (Barcelona) ● North Holland (Amsterdam) ● Lombardy (Milan)

NB: Workers who have higher-level scientific training and are employed as professionals or technicians.

*Population between 15 and 74 years.

Source: Eurostat

Population employed in science and technology in 2019, and research and development expenditure in the European regions for 2018

Total R&D domestic expenditure (% GDP) 2018	Domestic expenditure in the business sector on R&D (% GDP) 2018	Region (CITY)	Employees in science and technology (% population) 2019	Employees in science and technology (thousands) 2019
2.90	1.99	Île-de-France (PARIS)****	22.1	1,974
1.70	1.00	Community of Madrid (MADRID)	21.2	1,063
–	–	Istanbul (ISTANBUL)	8.3	950
1.54	0.94	Catalonia (BARCELONA)	16.6	944
1.99	1.43	Masovia (WARSAW)	21.9	869
2.77	1.83	Rhône-Alpes (LYON)****	17.8	849
1.34	1.03	Lombardy (MILAN)	11.0	822
4.03	2.99	Upper Bavaria (MUNICH)*	20.7	732
0.92	0.34	Andalusia (SEVILLE)	10.5	669
3.41	1.37	Berlin (BERLIN)*	23.1	636
0.67	0.41	East London (LONDON)	32.0	600
7.69	7.21	Stuttgart (STUTTART)*	17.8	558
2.06	1.05	South Holland (ROTTERDAM)***	19.8	550
1.75	0.65	Lazio (ROME)	12.3	542
2.97	1.29	Colònia (COLÒNIA)*	15.8	529
2.49	1.52	Provence-Alps-Cote d'Azur (MARSEILLE)****	14.7	528
1.94	0.78	North Holland (AMSTERDAM)***	24.4	528
3.27	2.56	Darmstadt (FRANKFURT)*	17.3	527
3.75	2.76	Stockholm (STOCKHOLM)*	29.2	512
1.96	1.49	Dusseldorf (DUSSELDORF)*	13.0	503
0.72	0.50	Upper Silesia (KATOWICE)	14.0	464
–	–	Ankara (ANKARA)	11.1	461
1.55	1.27	Surrey, East Sussex and West Sussex (BRIGHTON)	22.0	454
1.06	0.48	Community of Valencia (VALENCIA)	11.8	448
1.53	0.92	Attica (ATHENS)	15.0	429
0.91	0.44	Nord-Pas-de-Calais (LILLE)****	13.7	402
4.75	3.38	Midi-Pyrénées (TOULOUSE)****	17.9	393
1.10	0.80	East and Central Ireland (DUBLIN)**	21.6	389
2.14	1.41	Lesser Poland (Kraków)	16.1	385
3.65	2.34	Berkshire, Buckinghamshire and Oxfordshire (OXFORD)	21.9	380

NB: Workers who have higher-level scientific training and are employed as professionals or technicians. Internal expenditure includes capital, current and employment expenditure (for both researchers and administrative personnel), linked to research activities in proportion to the GDP.

* Data from 2017 for internal R+D expenditure (total and business).

** Data from 2015 for internal R+D expenditure (total and business).

*** Data from 2014 for internal R+D expenditure (business).

**** Data from 2013 for internal R+D expenditure (total and business).

Source: Eurostat

The first part of the paper discusses the importance of understanding the local context in which a project is implemented. This includes a thorough analysis of the social, economic, and cultural factors that may influence the success or failure of the intervention. The second part of the paper presents a detailed description of the project itself, including its objectives, methods, and results. The third part of the paper discusses the challenges that were encountered during the implementation of the project and the strategies that were used to overcome them. The final part of the paper provides a conclusion and some recommendations for future research and practice.





Introduction

The results for tourist activity in the city of Barcelona in 2019 were very positive, with demand showing record figures of 13,953,209 tourists and 33,807,811 overnight stays in tourist establishments, according to the Barcelona Tourist Observatory. However, the outbreak of Covid-19 in 2020 has hit economic activity hard, and the tourist sector in particular. Following the declaration of the state of alert on 14 March, population mobility virtually stopped, while foreign tourism hit rock bottom as a result of the borders being closed. The scaling down of lockdown measures from June onwards means the sector's outlook has improved slightly but a return to pre-health crisis levels remains uncertain. Future trends will depend on controlling the pandemic, the travel requirements put in place and the possibility of establishing safe tourist corridors that reassure travellers.

In this context, Barcelona City Council, in collaboration with the tourist board Turisme de Barcelona and other important city players, is drawing up a reactivation plan that includes measures geared towards boosting confidence and restoring Barcelona's reputation as a safe city and destination (*Barcelona, Safe City/Safe Visit*); introducing an App that provides visitors with ample information so they can pursue their leisure activities sure of the safety and hygiene of the destination; tourist promotion activities targeted at the general public; and measures to stimulate cultural consumption and promote cultural tourism.

Looking ahead to 2021, there are reasons for optimism in what we have seen in Asian countries where the pandemic is more under control and with the reopening of the country: national journeys have shot up as a result of the accumulated eagerness to travel, following months with lots of travel restrictions. The sector should be ready to capture this restrained demand ("tourism revenge"), which will have a strong preference for flexible travel, by train or car, and for establishments offering firm guarantees regarding cleaning.

Barcelona's good position as an international tourist destination is reflected in the key benchmark rankings for the sector. Thus, Barcelona is the 7th city in the world with the best brand according to the Saffron City Brand

Barometer 2020, a ranking that measures the city's assets and its reputation as an international tourist destination. In 2019, and for the third consecutive year, Barcelona is eighth among the European cities preferred by international visitors, despite dropping five places to 36th in the global rankings, according to *Top Cities Destination Ranking 2019*, a Euromonitor International report. As regards MICE tourism, 2019 saw Barcelona hold onto first place in the world in number of delegates and fourth in meetings, according to ICCA.

Tourism's good performance in the city was reinforced by the good quality of the main entry points for international tourists, which continue to register record figures. Barcelona's El Prat airport set a new passenger-traffic record with over 52 million visitors in 2019, although passenger numbers grew at a slightly lower rate compared to the two previous years (up 5% compared to 6.1% in 2018 and 7.1% in 2017), according to data supplied by Aena. In spite of this slower growth, El Prat airport rose a place, to 6th in the European passenger-traffic ranking, and out of the 25 main airports it came 8th in the list of airports showing the most growth. Moreover, as regards the departure point and destination of cruise ships, Barcelona was the main port in Europe and the Mediterranean for the nineteenth consecutive year. Over the course of 2019, around 3.1 million cruise passengers passed through the Port of Barcelona, a figure that sets a new record and which represents a 3.2% increase on the previous year.

The pandemic interrupts the positive performance of Barcelona's tourist sector, which recorded record figures in 2019

Main European airports by passenger volume in 2019

Barcelona airport surpasses the threshold of 52 million passengers and now occupies 6th place among the main European airports



In 2010, the Josep Tarradellas Barcelona - El Prat Airport achieved a new passenger-traffic record, surpassing the threshold of 52 million passengers for the first time. Barcelona airport's passenger traffic grew by nearly 2.5 million people (up 5%), reaching a figure of 52,688,455 people in 2019, according to data supplied by Aena. As a result of this growth, Barcelona's airport exceeded Istanbul's (which recorded a loss of passengers) and is now in 6th position in the European ranking, just behind London-Heathrow, Paris-Roissy, Amsterdam, Frankfurt and Madrid.

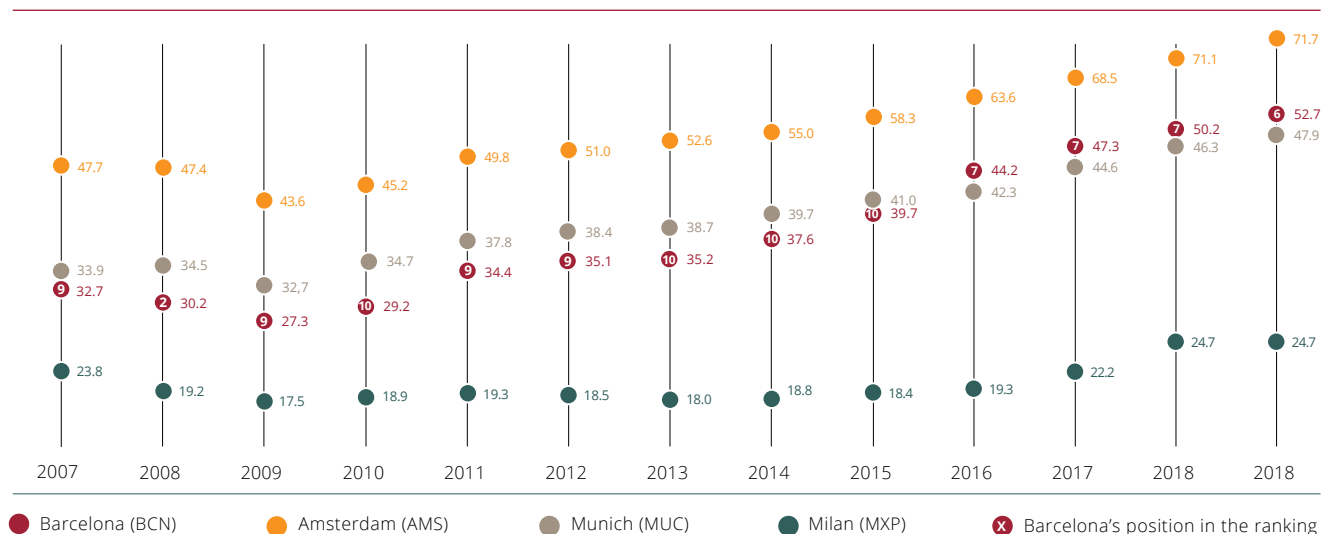
The annual evolution in passenger traffic in 2019 was positive in all of Europe's 25 major airports, with the exception of four (Istanbul, Moscow-Domodedovo, Paris-Orly and Copenhagen), according to data from the *Airport Traffic Report*. However, the rate of growth varied widely from 0.4% in Oslo to 17.1% in Vienna. El Prat, with an annual growth of 5%, is the 8th airport in terms of biggest growth out of Europe's 25 main airports, and 4th out of the top ten airports.

European air traffic, with 31.2 million passengers (61.5% of the total) was the major contributor to El Prat's total growth in absolute terms, with 1.2 million more people (a 48% increase). However, in relative terms, this figure showed the smallest increase (3.8%). In relative terms, there has been a notable increase in intercontinental passenger traffic (from outside Europe) which rose by 14.8% to reach a total of 6.3 million passengers (12% of the total). National travel grew by 4.1% to 14 million passengers (26.5% of the total).

However, in 2020, Covid-19 has abruptly and negatively affected this trend, with a 75.1% fall in the number of passengers at Barcelona airport up to November, compared to the previous year. As for future bookings at the city's airport during the winter season, a fall of almost 90% is forecast for the period November 2020-April 2021, compared to the same months in 2019-2020. The situation is one of great uncertainty, and the recent trend in air traffic is more positive at the Russian and Turkish airports – where domestic demand is more dynamic – than those in western Europe, where a slower recovery is forecast both in the number of flights and passengers.

Passengers

(millions)



NB: In 2010, the Airport of Barcelona dropped one position with the entry of Istanbul Airport in the data statistics of the ACI. If it had not been included, Barcelona would have maintained the ninth position.

Source: *Airport Traffic Report*. Airports Council International, ACI Europe, and the Barcelona Air Route Development Committee (CDRA).

Main airports by passenger volume. 2019

	City (airport)	Variation 2019/2018 (%)	Passengers 2019
1	London Heathrow (LHR)	1.0	80,888,637
2	Paris Roissy (CDG)	5.5	76,171,198
3	Amsterdam (AMS)	0.9	71,706,999
4	Frankfurt (FRA)	1.5	70,556,072
5	Madrid (MAD)	6.6	61,734,944
6	Barcelona (BCN)	5.0	52,688,455
7	Istanbul (IST)	-22.8	52,461,982
8	Moscow-Xeremétievo (SVO)	10.1	49,932,752
9	Munich (MUC)	3.7	47,942,348
10	London Gatwick (LGW)	1.1	46,572,595
11	Rome-Fiumicino (FCO)	1.2	43,527,905
12	Antalya (AYT)	13.6	35,990,054
13	Istanbul-Sabiha Gökçen (SAW)	4.1	35,465,508
14	Dublin (DUB)	4.5	32,909,209
15	Paris-Orly (ORY)	-3.8	31,854,336
16	Vienna (VIE)	17.1	31,662,189
17	Zurich (ZHR)	1.3	31,463,915
18	Lisbon (LIS)	7.4	31,172,801
19	Copenhagen (CPH)	-0.2	30,196,885
20	Palma de Mallorca (PMI)	2.2	29,717,657
21	Manchester (MAN)	3.8	29,444,858
22	Milan Malpensa (MXP)	16.6	28,827,804
23	Oslo (OSL)	0.4	28,388,874
24	Moscow-Domodedovo (DME)	-3.9	28,252,337
25	London-Stansted (STN)	0.5	28,124,292

Source: Airports Council International (ACI) and Barcelona Air Routes Development Committee (CORA).

International tourists in cities around the world 2019

Barcelona remains one of the top ten international tourist destinations in Europe

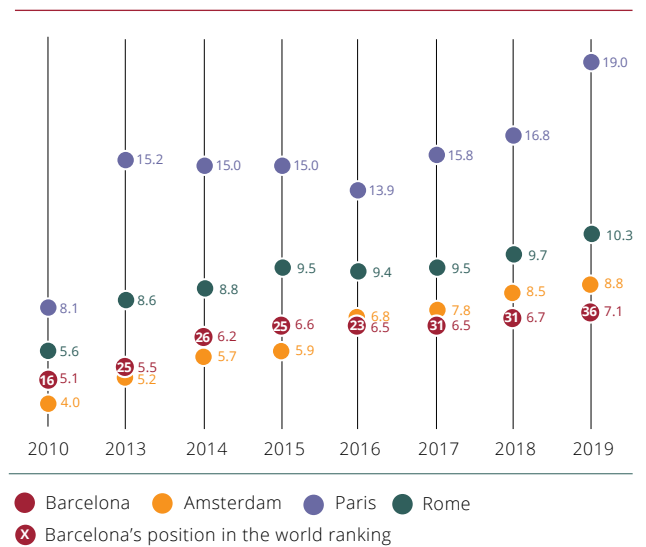


For the third year running, Barcelona is ranked the 8th most popular city in Europe, and 36th in the world, in terms of international visitors, out of a total of 100 cities, according to the *Top 100 City Destinations 2019*, produced by Euromonitor International. The number of international tourists that chose Barcelona as a tourist destination exceeded 7 million in 2019, according to Euromonitor's estimate, i.e. 4.3% more than the previous year. That figure puts Barcelona ahead of Moscow and Beijing on a global scale, and ahead of Vienna and Budapest on a European scale. It has the same position in the European ranking as in 2018, behind London, Paris, Istanbul, Antalya, Rome, Prague and Amsterdam, but has fallen five places in the global ranking. Meanwhile, the European Cities Marketing Benchmarking Report 2019 ranks Barcelona as the 7th most popular city in Europe in terms of tourist overnight stays in 2019, behind London, Paris, Berlin, Rome, Istanbul and Madrid, and 5th when measured by international tourist overnight stays.

However, the good situation tourism was in has been affected by the outbreak of the pandemic, along with the imposition of restrictions on mobility and the border closures since March. Measures which have seen tourist establishment bookings hit rock bottom. The future trend in the sector will depend on increasing tourist confidence in travel, by means of control elements and safety measures, such as PCR tests, taking travellers' temperatures and so on.

International tourists

(millions)



Source: *Top Cities Destination Ranking*. Euromonitor International.

International tourists in cities around the world. 2019

	City	Variation 2019/2018 (%)	International tourists 2019 (thousands) ¹		City	Variation 2019/2018 (%)	International tourists 2019 (thousands) ¹
1	Hong Kong	-8.7	26,716.8	21	Mecca	2.8	9,833.0
2	Bangkok	6.9	25,847.8	22	Prague	2.3	9,150.9
3	Macau	9.0	20,637.1	23	Seoul	8.0	9,105.9
4	Singapore	6.5	19,760.8	24	Guangzhou	0.0	9,006.3
5	London	1.7	19,559.9	25	Osaka	14.5	8,998.9
6	Paris	8.7	19,087.9	26	Amsterdam	5.8	8,835.4
7	Dubai	2.6	16,328.3	27	Medina	3.2	8,820.7
8	Delhi	20.2	15,196.5	28	Denpasar	19.4	8,582.8
9	Istanbul	9.6	14,715.9	29	Miami	2.7	8,336.8
10	Kuala Lumpur	4.8	14,072.4	30	Ho Chi Minh City	14.0	8,208.0
11	New York	3.0	14,010.0	31	Chennai	23.5	7,930.1
12	Antalya	7.2	13,332.1	32	Shanghai	3.5	7,745.5
13	Mumbai	17.5	12,442.4	33	Los Angeles	3.0	7,725.9
14	Shenzhen	1.0	12,324.1	34	Jaipur	18.5	7,562.9
15	Phuket	3.9	10,965.2	35	Johor Bahru	13.0	7,227.4
16	Tokyo	4.6	10,443.1	36	Barcelona	4.5	7,016.6
17	Rome	2.5	10,317.0	37	Cairo	18.3	6,808.3
18	Agra	24.4	10,127.4	38	Las Vegas	0.7	6,639.3
19	Taipei	4.0	9,981.7	39	Vienna	3.5	6,634.7
20	Pattaya	3.6	9,951.9	40	Milan	1.9	6,604.4

¹ Euromonitor estimate.

NB: Visitor is understood to mean any person who is in the city for at least 24 hours and less than 12 months, and who stays in a private establishment or collective accommodation. People who travel to the city for day trips and domestic tourists are excluded from these figures

Source: *Top 100 Cities Destinations 2019*. Euromonitor International.

Cruise ships in major Mediterranean ports in 2019

The Port of Barcelona continues to lead the Mediterranean for the nineteenth consecutive year



In 2019, for the nineteenth consecutive year, Barcelona was the main base port in Europe for cruise ship tourism, achieving a new record for cruise-ship passengers – 3.14 million according to Medcruise statistics. Thus, worldwide, Barcelona was the 4th homeport in 2019, just behind the three big port enclaves in Florida (Miami, Port Canaveral and Port Everglades) according to the magazine *Cruise Insight* (autumn 2019).

Barcelona recorded an annual growth of 3.2% in 2019, the lowest increase among the ten main ports in the Mediterranean. This increase was the result of an increase in the passengers who boarded and disembarked in the city with an year-on-year variation of 5.1% and 5.2% respectively. On the other hand, the number of passengers in transit (45.2% of the total) is practically the same, with a slight increase of 0.7%. The seasonal nature of demand in the cruise-ship market is even more marked, with minimum passenger numbers during the winter months (above all in January and February) and maximum numbers in the summer months (July to October). Thus, in all the months between May and October, there were over 300,000 passengers.

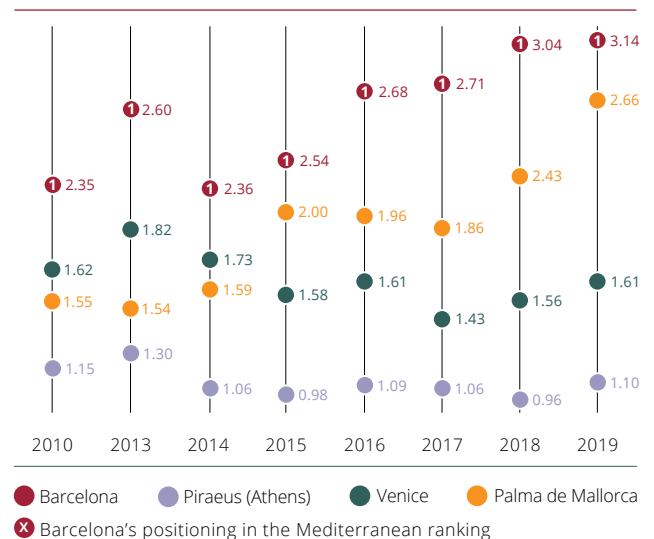
In 2020, cruise-ship tourism has been hard hit by the restrictions imposed on mobility to control the pandemic. Since April, there have been no cruise ships in the Port of Barcelona, and the accumulated annual loss of cruise-ship passenger tourists has been 93.5% up to November.

Cruise ship passengers in main Mediterranean ports. 2019

	City	Variation 2019/2018 (%)	Passengers 2019 (thousands)
1	Barcelona	3	3,137,918
2	Balearic Islands	9	2,658,156
3	Civitavecchia	9	2,652,403
4	Genoa	9	2,018,847
5	Marseilles	9	1,865,918
6	Venice	3	1,611,341
7	Naples	24	1,454,023
8	Piraeus	14	1,098,091
9	Tenerife	5	1,067,440
10	Valletta	27	902,425
11	Livorno	9	888,346
12	Corfu	10	807,197
13	Dubrovnik	10	804,881
14	Bari	12	763,195
15	French Riviera ports	14	697,361

Source: MedCruise Ports.

Cruise-ship passengers (millions)



Source: Cruise Insight. MedCruise and Ports de l'Estat



Prices and costs



Introduction

This last year, marked by Covid-19, saw a decline in housing prices, while office prices remained stable compared to the previous year. In contrast, there was an increase in the price of logistics land in Barcelona and the surrounding area. In fact, according to the CBRE consultancy firm, this sector became the property safe spot during the pandemic, showing more resilience and profitability than in previous years. These variations mean that the city's position within the wider European context differs, depending on the market, from the medium-low range in housing rentals, through the average in the office market, to a high position in the case of logistics space. In this context, an overall reduction in prices of -0.9% was expected in Catalonia, a trend that contrasts with the 0.9% increase in both Barcelona and Catalonia in 2019. In relation to other cities around the world, trends in reduction and stability that prevailed in 2020 made cities a more competitive option to attract global investment and business. This does not detract from the fact that there are signs of improvement, such as the supply of logistics land. This is the only market that has seen an increase in rental prices that could be accelerated if the recent increase in demand due to better performance is taken into account.

In line with the reduction in prices, in 2020 Barcelona fell in the world ranking of cities with the highest cost of living, according to Mercer Human Resource Consulting. This is the third consecutive year that it has dropped places at a global level and the first year since 2015 that it has done so among cities in the Eurozone (going from 14th to 15th position).

According to statistics for 2018 produced by UBS, salary levels in Barcelona continue to be at the medium-low end when compared with other European cities. They appear to be only higher than cities like Lisbon, Athens, Prague and Budapest, but way below other similar cities such as Dublin, Munich, Amsterdam and Milan. Compared to three years ago, the situation remains stable, mainly because the increase in salaries recorded in the city is part of a context of salary increases in other cities around the world. By sex, women's salary was 27,203 euros gross per year

and men's was 34,534 euros in 2018, the last year for which data is available from Barcelona City Council. The gender wage gap stood at 21.2%, below the Catalan (23%) and Spanish (22.5%) averages. In 2020, the slight fall in prices up to November and the wage increases applied or agreed before the start of the pandemic increased the purchasing power of some groups such as public employees, pensioners and, to a lesser extent, employees with collective agreements who were not dismissed or affected by ERTE [financial assistance from the Spanish government], according to data from the Ministry of Employment.

In relation to taxation, Spain is in line with the EU average regarding tax rates. Corporate tax remains at 25%, a figure that has not changed since 2016 when it was reduced from 28%. As far as social contributions are concerned, there is a considerable difference between the rate paid by the worker (one of the lowest in the area) and that paid by the company (one of the highest). Only if the average of both were taken into account, would Spain be in an intermediate position compared to other EU countries. With regard to indirect taxation, VAT remained at 21% in 2020. The consequences of the pandemic led certain European countries to reduce the general rate temporarily. Along these lines, Spain reduced the rate on face masks to 4%.

Barcelona
improves
its cost
competitiveness
in 2020

Cost of living in cities in the world 2020

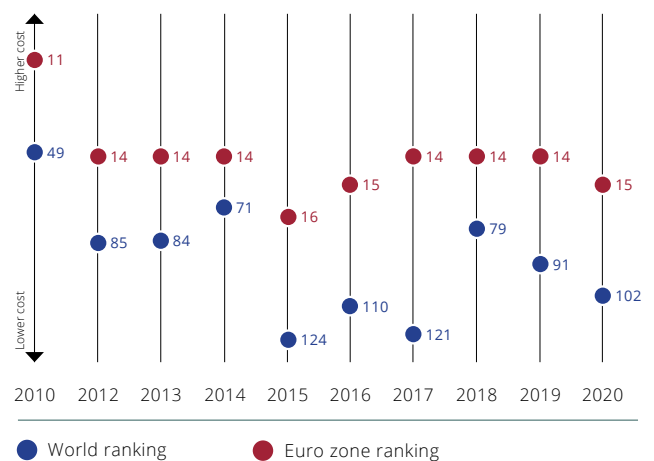
Barcelona gains competitiveness in the cost of living



Barcelona came in 102nd in the 2020 ranking of 209 cities around the world with the highest cost of living, according to Mercer's *Worldwide Cost of Living Survey*. The ranking is produced by analysing the comparative cost of over 200 basic products and services measured up to March of the current year. This position, which is marked by the current health situation and economic crisis brought about by Covid-19, means a drop of eleven places from 91st in 2019. Border closures, flight disruptions, compulsory lockdown and other short-term disruptions affected the cost of goods and services. It should be noted that, from March 2020, the general price index in Catalonia recorded year-on-year falls in practically all sectors, except for food and drink, with transport and housing being the most affected. This reduction in prices exceeded the effect of the slight appreciation of the euro against the dollar in March (the comparison is made in relation to New York and in US dollars). However, this position is higher than those of the period 2015-2017, which were mainly due to the higher cost of products and services in other cities.

In terms of the comparison by Eurozone cities (28 in total), Barcelona went from 14th to 15th position, which it last occupied in 2016. Since 2010, the city has remained very stable in this European classification, which is explained by the fact that the phenomena that have determined the cost of living in recent years have been globally present across all cities.

Position of Barcelona



Source: *Worldwide Cost of Living Survey, City Ranking*. Mercer Human Resource Consulting.

Cost of living of cities in the world

2019 Ranking	City	2020 Ranking	2019 Ranking	City	2020 Ranking
1	Hong Kong	1	33	Nagoya	26
7	Ashgabat	2	47	Dhaka	27
2	Tokyo	3	35	Taipei	28
5	Zurich	4	38	Honolulu	29
3	Singapore	5	37	Chicago	30
9	New York	6	35	Riyadh	31
6	Shanghai	7	42	Washington	32
12	Bern	8	24	Libreville	33
13	Geneva	9	27	Nanjing	34
8	Beijing	10	40	Bangkok	35
4	Seoul	11	30	Abidjan	36
15	Tel-Aviv	12	44	Miami	37
10	Shenzhen	13	32	Tianjin	38
14	Victoria	14	33	Abu Dhabi	39
11	N'Djamena	15	30	Chengdu	40
16	San Francisco	16	49	Boston	41
18	Los Angeles	17	29	Nouméa	42
25	Lagos	18	41	Tsingtao	43
23	London	19	39	Brazzaville	44
17	Guangzhou	20	53	Beirut	45
27	Moscow	21	43	Dublin	46
19	Osaka	22	45	Milan	47
21	Dubai	23	56	White Plains	48
22	Kinshasa	24
20	Copenhagen	25	91	Barcelona	102

Source: Cost of Living Survey, City Ranking, Mercer Human Resource Consulting.

Corporate Tax, VAT and Social Security contributions in countries in the world 2020

The main taxation rates remain in the middle band for the main European Union economies



Spain continues to be at the medium end of Europe regarding rates in the main tax categories, according to the comparison published by KPMG. As regards indirect taxation, the VAT rate is currently 21%. This is in line with the European Union average (21.5%) and around the rates of neighbouring countries such as Portugal (23%), Italy (22%) and France (20%). In 2020, with the arrival of the pandemic, some countries decided to temporarily reduce the standard rate of VAT. In the same vein, the European Commission has made it possible to reduce the rate on face masks, which are essential for dealing with Covid-19.

With regard to direct taxes, corporate tax was at 25% in 2020, above the EU average (22.7%). The last modification of the rate took place in 2016 with a reduction of 3 p.p.

However, in this case it is more appropriate to compare the effective rate, than the legal rate, as the latter can differ considerably. According to the OECD, in 2017 Spain had an average effective rate of 24.8%, the seventh highest in the EU. Lastly, the maximum income tax rate (IRPF) in Spain was set at 45% in 2020, above the European average (37.1%), and it remained the same as in 2019 (this marginal rate is applied from €60,000 upwards)

As regards social security contributions, the percentage paid by the worker (6.4%) is considerably lower than that paid by the employer (29.9%). In the first case, Spain would be at the bottom of the ranking, while in the second, it would occupy 6th place in the ranking. However, overall, the average rate of total contributions in Spain is in the middle range of the ranking.

Corporation tax. 2020 (%)



Source: Tax Rate Online 2020. KPMG.

VAT, Corporation Tax and Social Security contributions in countries around the world. 2020

Country	Basic VAT rate (%)	Country	Base Corporate tax rate (%)	Country	Social security rates workers (%)	Country	Social security rates companies (%)
Hungary	27.0	Japan	30.6	Netherlands	27.7	France	45.0
Denmark	25.0	India	30.0	France	23.0	Slovakia	35.2
Norway	25.0	Germany	30.0	Slovenia	22.1	Czech Republic	33.8
Sweden	25.0	Argentina	30.0	Germany	20.1	Sweden	31.4
Finland	24.0	Australia	30.0	Hungary	18.5	Italy	30.0
Greece	24.0	Belgium	29.0	Austria	18.1	Spain	29.9
Ireland	23.0	France	28.0	Argentina	17.0	China	28.5
Poland	23.0	South Africa	28.0	Greece	15.8	Belgium	27.5
Portugal	23.0	United States	27.0	Japan	15.2	Greece	24.8
Slovenia	22.0	Canada	26.5	Poland	13.7	Letonia	24.1
Italy	22.0	Austria	25.0	Slovakia	13.4	Portugal	23.8
Argentina	21.0	South Korea	25.0	Belgium	13.1	Netherlands	23.2
Belgium	21.0	Spain	25.0	Luxembourg	12.5	Poland	22.1
Spain	21.0	Netherlands	25.0	India	12.0	Austria	21.4
Letonia	21.0	Tunisia	25.0	Israel	12.0	Hungary	21.0
Netherlands	21.0	China	25.0	Finland	11.8	Finland	20.8
Czech Republic	21.0	Luxembourg	24.9	Letonia	11.0	Argentina	20.4
Austria	20.0	Greece	24.0	Portugal	11.0	Germany	19.9
Slovakia	20.0	Italy	24.0	Czech Republic	11.0	Tunisia	16.6
France	20.0	Israel	23.0	China	10.5	Slovenia	16.1
United Kingdom	20.0	Norway	22.0	Italy	9.5	Japan	15.5
Germany	19.0	Denmark	22.0	Tunisia	9.2	Luxembourg	15.0
Cyprus	19.0	Sweden	21.4	South Korea	9.0	Norway	14.1
India	18.0	Slovakia	21.0	Cyprus	8.3	United Kingdom	13.8
Tunisia	18.0	Portugal	21.0	Norway	8.2	India	12.0
Israel	17.0	Finland	20.0	United States	7.7	Ireland	11.1
Luxembourg	17.0	Letonia	20.0	Sweden	7.0	South Korea	10.0
South Africa	15.0	Slovenia	19.0	Canada	6.7	Cyprus	8.3
China	13.0	Poland	19.0	Spain	6.4	Israel	7.6

NB: The original database contains 138 countries, although the table only includes a selected sample of countries for reference.

Source: Tax Rate Online 2020. KPMG.

Office rental prices in European cities in 2020

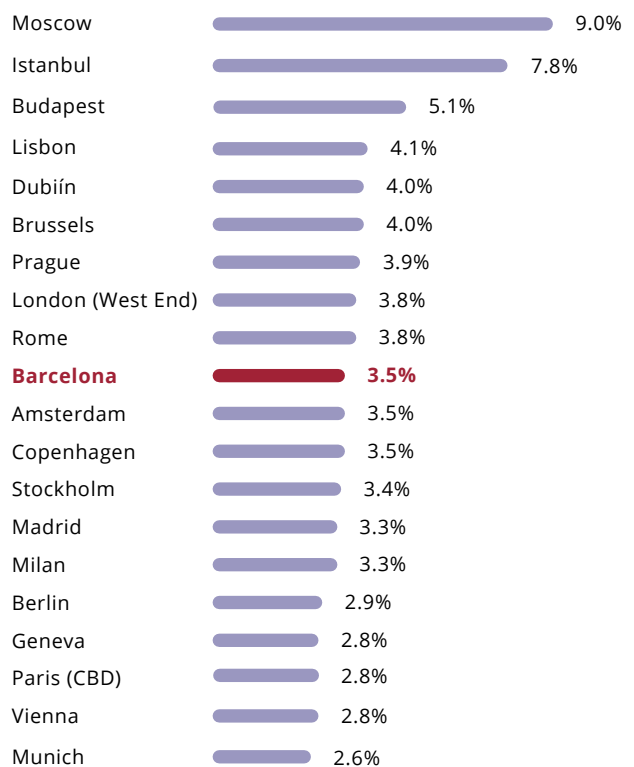
Rental prices for offices remained stable, but remain in the middle band among the main European cities



In 2020 office rental in Barcelona was around 339 euros per square metre (m²) per year, a 0.9% increase on the previous year. According to Cushman & Wakefield Research's analysis for Q3 2020, price stability in office rent is the predominant trend in most cities in a context of economic crisis due to the pandemic and the growth of working-from-home. At the extremes, Leeds and Rome show the largest relative increases (13.3% and 11.4% respectively), while Moscow and Istanbul show the largest contractions (-20% and -15.6% each). This general trend of maintaining prices has meant that Barcelona continues to be in the lower middle range of the selected cities – 28th position of the total of 48 European cities analysed – considerably below cities such as London WE (1,249 euros), Paris CBD (860 euros), Geneva (837 euros) or Dublin (673 euros). Office rentals in Barcelona would in fact be more in line with those in cities such as Düsseldorf, Gothenburg or Lyon, all of which have prices between 310 and 350 euros. Alternatively, office rent in Madrid rose slightly to 420 euros/m², placing it in 23rd position.

As for the profitability of renting office space in Barcelona, that is, the return on investment made, in 2020 the rate remains at the 3.5% of the last three years. This percentage is the same as that observed in cities such as Amsterdam or Copenhagen and is slightly higher than the return offered by Madrid or Milan (3.3% in both cases). The cities with the highest return on office rentals are: Moscow, Istanbul and Budapest (with values above 5%). In contrast, Paris CBD, Vienna and Munich offer the lowest returns (below 3%).

Profitability of the office rental market in European cities. 2020



NB: Profitability refers to the return on investment in the office sector of each city.

Source: Cushman & Wakefield Research, The DNA of Real Estate, 31. 2020 (Europe).

Office rental price in European cities. 2020

City	Interannual variation 2020/2019 (%)	Rent Offices (€/m ² /year)	City	Interannual variation 2020/2019 (%)	Rent Offices (€/m ² /year)
London (WE)	-4.5	1,249	Glasgow	6.2	410
Paris (CBD)	1.2	860	Leeds	13.3	404
Geneva	0.0	837	Hamburg	8.1	360
London (City)	-2.9	803	Düsseldorf	1.8	342
Stockholm	0.0	762	Barcelona	0.9	339
Zurich	3.9	744	Brussels	0.0	320
Dublin	0.0	673	Gothenburg	3.1	318
Luxembourg	2.0	612	Vienna	0.0	318
Milan	1.7	600	Lyon	3.3	310
Paris (La Défense)	0.0	550	Newcastle	6.1	309
Frankfurt	0.0	540	Budapest	0.0	300
Rome	11.4	490	Malmö	3.3	299
Moscow	-20.0	479	Cardiff	0.0	297
Amsterdam (South Axis)	0.0	475	Warsaw	-1.0	285
Munich	2.6	474	Istanbul	-15.6	277
Helsinki	-0.7	456	Lisbon	0.0	276
Berlin	0.0	456	Prague	-4.3	270
Bristol	5.6	452	Marseilles	0.0	260
Manchester	2.7	446	Copenhagen	0.0	255
Oslo	-2.1	440	Rotterdam	0.0	235
Birmingham	8.8	440	Bucharest	0.0	228
Edinburgh	1.4	422	The Hague	7.1	225
Madrid	0.7	420	Bratislava	0.0	204

Source: Cushman & Wakefield Research, *The DNA of Real Estate*, 3Q. 2020 (Europe).

Retail premises rental prices in cities around the world 2019

Portal de l'Àngel is one of the top 20 most expensive shopping streets in Europe

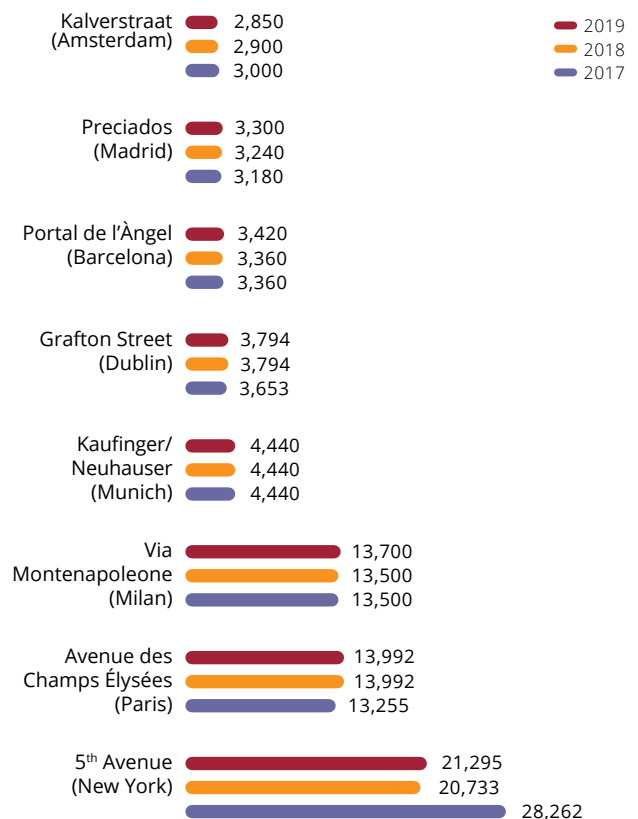


For the tenth consecutive year, Portal de l'Àngel is ranked as the most expensive street in Spain, with a rental price of €3,420 a year per m², with data from the second quarter of 2019, according to the Main Streets Across the World 2019 report by Cushman & Wakefield. Portal de l'Àngel has occupied the 15th position in the world ranking and has lost one position compared to 2018. Barcelona's street has lagged behind other European commercial hubs –located in London, Paris, Milan, Rome or Zurich– and worldwide –Tokyo, Sydney, Seoul or Beijing, and it has been located in front of the Preciados street in Madrid, with €3,300/m²/year, or the main ones in Lion or Edinburgh. The world ranking is continued to lead by Causeway Bay in Hong Kong and 5th Avenue in New York, with €25,965 and €21,295/m²/year, respectively. This classification is based on an analysis of the prices of 445 markets in 65 countries.

In 2020, with data only available at the European level, the rental price on Portal de l'Àngel has been reduced from €3,420/m²/year to €3,240, according to the report The DNA of Real State, 3T. 2020 (Europe) by Cushman & Wakefield Research. However, after eleven years it remains the most expensive shopping street in Spain and in a position very similar to that of the previous year in the European ranking, as this trend has also occurred in the other main cities. Thus, Premium streets such as New Bond (London), the Champs Élysées (Paris) or Montenapoleone Avenue (Milan) continue to top the European classification with annual rents above €13,700/m²/year.

Retail premises rental prices

(€/m²/year)



Source: Main Streets Across the World. Cushman & Wakefield Data from the second quarter of 2019.

Commercial-premises rental prices in cities around the world. 2019

Ranking 2019	Ranking 2018	Country	City	Street	Commercial- premises rental prices (€/m ² /year)
1	1	China	Hong Kong	Causeway Bay	25,965
2	2	USA	New York	Upper 5th Avenue (49 th - 60 th Sts)	21,295
3	3	United Kingdom	London	New Bond Street	16,222
4	4	France	Paris	Avenue des Champs Élysées	13,992
5	5	Italy	Milan	Via Montenapoleone	13,700
6	6	Japan	Tokyo	Ginza	11,838
7	7	Australia	Sydney	Pitt Street Mall	10,185
8	9	Switzerland	Zurich	Bahnhofstrasse	8,195
9	8	South Korea	Seoul	Myeongdong	8,163
10	10	Austria	Vienna	Kohlmarkt	4,860
11	11	China	Beijing	Wangfujing	4,453
12	12	Germany	Munich	Kaufinger/Neuhauser	4,440
13	13	Ireland	Dublin	Grafton Street	3,794
14	15	Greece	Athens	Ermou	3,420
15	14	Espanya	Barcelona	Portal de l'Àngel	3,420
16	17	Singapore	Singapore	Orchard Road	2,957
17	16	Netherlands	Amsterdam	Kalverstraat	2,850
18	19	Czech Republic	Prague	Na Příkopě Street	2,820
19	18	Russia	Moscow	Stoleshnikov	2,728
20	21	India	New Delhi	Khan Market	2,302
21	20	Norway	Oslo	Karl Johan	2,268
22	24	Malaysia	Kuala Lumpur	Suria KLCC	2,194
23	27	Taiwan	Taipei	Ximen	2,053
24	26	Sweden	Stockholm	Biblioteksgatan	1,989
25	23	Canada	Toronto	Bloor Street	1,952
26	22	Luxembourg	Luxembourg	Grand Rue	1,920
27	25	Belgium	Antwerp	Meir	1,900
28	28	Denmark	Copenhagen	Stroget (including Vimmelskaftet)	1,837
29	31	Hungary	Budapest	Váci Utca (Best Achieved Shopping Mall)	1,800
30	29	Vietnam	Ho Chi Minh	Best Achieved Shopping Mall (GF)	1,741

NB: This ranking includes only the most expensive shopping street in each country.

Source: *Main Streets Across the World 2018*. Cushman & Wakefield. Data from the second quarter of 2019.

Rental prices for logistics land in the main urban areas in Europe in 2020

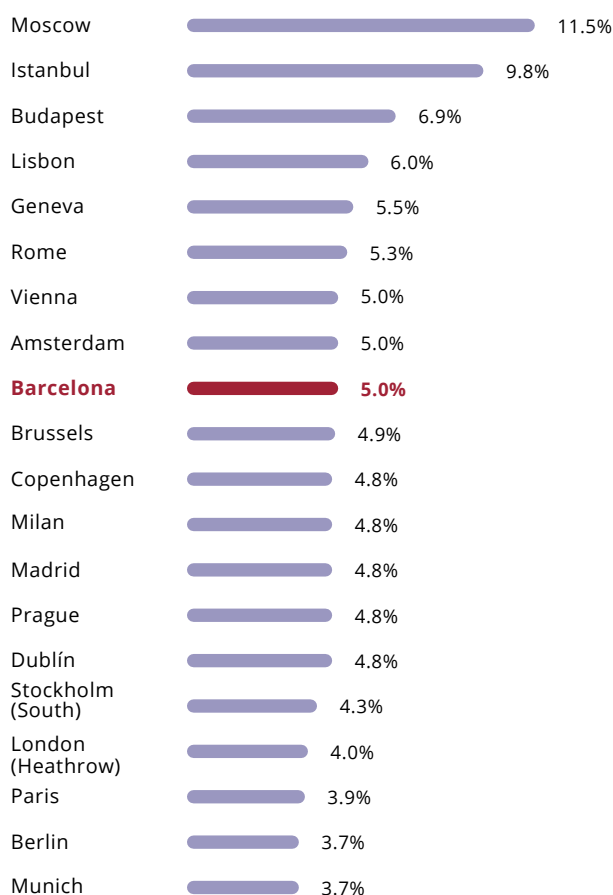
Barcelona is situated in the upper range of Europe's main urban areas in terms of the price of logistical land rental



In 2020, the price of logistics land in the city increased by 3.6% to 87 euros per square metre (m²). According to the report published by Cushman & Wakefield Research, this trend is different from the global pattern of price stability in most areas - both in the more expensive areas such as London, Geneva or Zurich, and in others such as Lisbon, Antwerp or Warsaw which are at the bottom of the ranking. The average rent in Barcelona would be in line with areas such as Bristol, Gothenburg (Arendal) and Manchester. As for the region of Madrid, it occupies 28th place with a price of 63 euros/m² for the largest space available. The prices of logistics land in both Spanish cities are higher than those of capital cities such as Paris (57 euros/m²), Rome (55 euros/m²) or Lisbon (48 euros/m²).

In relation to the performance of the logistics land market, the return percentages are between 4% and 6% in the vast majority of cases. From a selection of 20 areas, Barcelona occupies 9th place in the middle band with a return of 5%, equal to the percentage of 2019 and that offered by cities such as Amsterdam and Vienna. Madrid would be slightly below, in 13th place, with a return of 4.8%. The urban area offering the highest return continues to be Moscow at 11.5%.

Profitability of the office rental market in European cities. 2020



NB: Profitability refers to the return on investment in the office sector of each city.

Source: Cushman & Wakefield Research. *The DNA of Real Estate*, 31. 2020 (Europe).

Rental price of logistics land in European urban areas. 2020

Urban areas	Interannual Variation of Rental Prices 2020/2019 (%)	Logistic land rentals 2020 (€/m ² /year)	Urban areas	Interannual Variation of Rental Prices 2020/2019 (%)	Logistic land rentals 2020 (€/m ² /year)
London (Heathrow)	0.0	184	Berlin	14.3	67
Geneva	0.0	167	Düsseldorf	0.0	67
Zurich	0.0	130	Vienna	0.0	66
Oslo	13.0	122	Newcastle	0.0	65
Stockholm (south)	4.2	121	Madrid	0.0	63
Helsinki	0.0	111	The Hague	9.1	60
Dublin	4.8	110	Budapest	3.2	59
Luxembourg	0.0	96	Brussels	0.0	58
Munich	7.1	90	Paris	1.2	57
Amsterdam (Schiphol)	2.3	90	Rome	0.0	55
Bristol	3.4	89	Milan	1.8	55
Barcelona	3.6	87	Prague	1.2	52
Gothenburg (Arendal)	5.9	87	Lyon	4.2	50
Manchester	3.6	86	Antwerp	0.0	48
Copenhagen	4.2	84	Lisbon	0.0	48
Birmingham	0.0	83	Bucharest	0.0	48
Frankfurt	4.8	78	Bratislava	0.0	48
Cardiff	0.0	77	Moscow	5.3	46
Leeds	4.0	77	Istanbul	-18.2	46
Malmö (Fosie, Bulltofta)	0.0	77	Sofia	0.0	46
Hamburg	5.0	76	Warsaw (Zone II)	0.0	46
Rotterdam	7.1	75	Marseilles	2.3	45
Central Scotland	0.0	71			

Source: Cushman & Wakefield Research, *The DNA of Real Estate*, 3Q 2020 (Europe).

Housing rental prices in the main European cities in 2020

At a European level, the price of housing in Barcelona is in the medium-low band

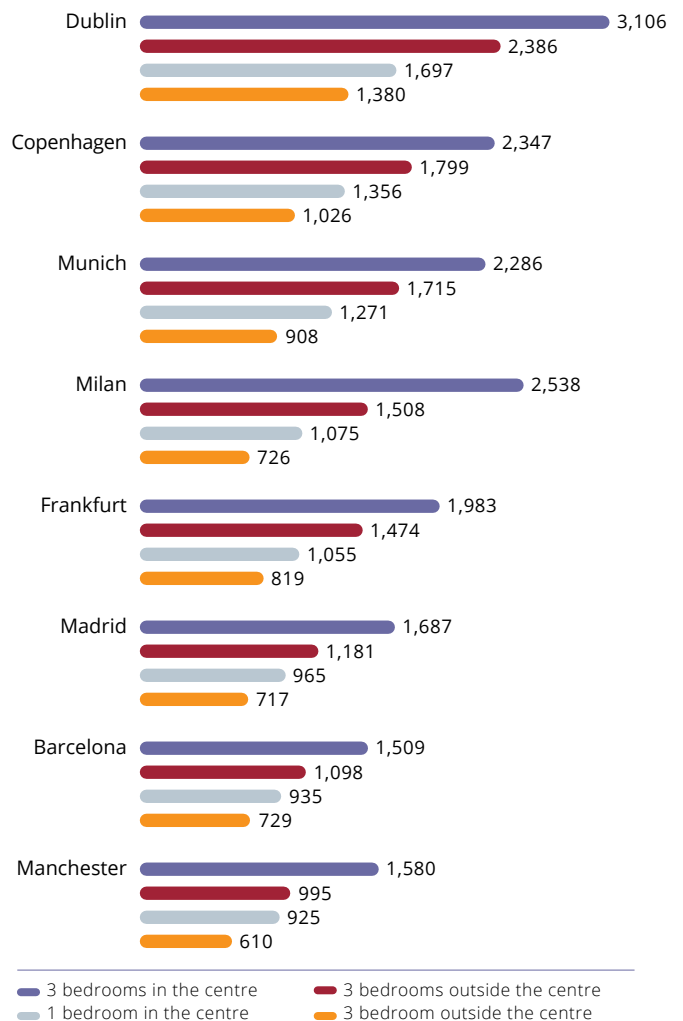


According to the Numbeo database, consulted in November 2020, the monthly price of a one-bedroom property in the centre of the city of Barcelona is 935 euros, 3.8% below the level of 2019 (972 euros according to the consultation made in October of that year). This reduction in prices, together with the notable increase in other European cities, meant that the city dropped from 29th in 2019 to 41st in 2020 out of a total of 168 European cities. While in 2019, the lowest rent among the 50 European cities with the most expensive rental prices for one-bedroom properties in the centre was 777 euros/month (Delft, Netherlands), in 2020 this threshold was considerably higher with 898 euros/month in Espoo, Finland. The price of housing in the centre of Madrid is slightly more expensive (965 euros/month) and ranks 39th. If the same property were located outside the centre of Barcelona, the monthly rent would be 729 euros, 28.3% less than in the centre. As for the rest of the cities, London, Geneva, Zurich, Dublin and Amsterdam continue to be the cities with the highest monthly rents (more than 1,600 euros paid for a one-bedroom property in the centre, around 100 euros more on average than last year).

For three-bedroom family or shared housing (also in the city centre), monthly rent is 1,509 euros in Barcelona, slightly below the 1,582 euros of 2019. Under this criterion, the position that the city would occupy would be even lower: 48th, a long distance from Madrid, which with a price of 1,687 euros per month, would remain fairly stable (37th). This difference in positions when comparing the price of small- and medium-sized homes in Barcelona is due to the fact that, in general, there is more supply of the latter than of the former, while at the same time there is more demand for small homes. However, with the increase in working-from-home because of Covid-19, it is possible that, depending on the roots of these patterns, the demand in the medium term will shift towards larger houses without the need to be near jobs, normally located in city centres.

Home rental prices in European cities. 2020

(€/month)



Source: Numbeo Consulted in November 2020.

Home rental prices in the centre of European cities (€/month). 2020

Ranking	City (Country)	3 bedrooms	1 bedroom	Ranking	City (Country)	3 bedrooms	1 bedroom
1	London (United Kingdom)	3.544	1.921	26	Edinburgh (United Kingdom)	1.767	1.061
2	Zurich (Switzerland)	3.331	1.799	27	Frankfurt (Germany)	1.983	1.055
3	Geneva (Switzerland)	3.179	1.766	28	Brighton (United Kingdom)	2.049	1.046
4	Dublin (Ireland)	3.106	1.697	28	Leiden (Netherlands)	1.550	1.042
5	Amsterdam (The Netherlands)	2.736	1.607	30	Breda (Netherlands)	1.339	1.026
6	Luxembourg (Luxembourg)	2.905	1.547	31	Bristol (United Kingdom)	1.728	1.025
7	Haarlem (Netherlands)	2.371	1.541	32	Trondheim (Norway)	1.587	1.002
8	Lausanne (Switzerland)	2.725	1.398	33	The Hague (The Netherlands)	1.639	1.002
9	Copenhagen (Denmark)	2.347	1.356	34	Reading (United Kingdom)	1.775	998
10	Oxford (United Kingdom)	2.349	1.308	35	Limerick (Ireland)	1.587	996
11	Munich (Germany)	2.286	1.271	36	Helsinki (Finland)	1.927	987
12	Sliema (Malta)	1.963	1.243	37	Maastricht (Netherlands)	1.780	978
13	Reykjavik (Iceland)	1.940	1.218	38	Göteborg (Sweden)	1.571	974
14	Utrecht (The Netherlands)	2.169	1.213	39	Madrid (Spain)	1.687	965
15	Paris (France)	2.651	1.211	40	Aarhus (Denmark)	1.675	949
16	Basel (Switzerland)	2.392	1.199	41	Barcelona (Spain)	1.509	935
17	Rotterdam (The Netherlands)	1.980	1.190	42	Stuttgart (Germany)	1.712	929
18	Cambridge (United Kingdom)	1.891	1.181	43	Tromsø (Norway)	1.559	926
19	Cork (Ireland)	1.923	1.171	44	Manchester (United Kingdom)	1.580	925
20	Eindhoven (The Netherlands)	1.602	1.163	45	Stavanger (Norway)	1.562	914
21	Oslo (Norway)	1.860	1.161	46	Sliema (Malta)	1.695	913
22	Bern (Switzerland)	2.294	1.120	47	Hamburg (Germany)	1.806	911
23	Lugano (Switzerland)	2.049	1.085	48	Rome (Italy)	1.800	907
24	Milan (Italy)	2.538	1.075	49	Berlin (Germany)	1.747	899
25	Valletta (Malta)	2.229	1.073	50	Espoo (Finland)	1.306	898

Source: Numbeo. Consulted in November 2020.

Salary levels in cities around the world 2018

Barcelona maintains positions in the salary ranking

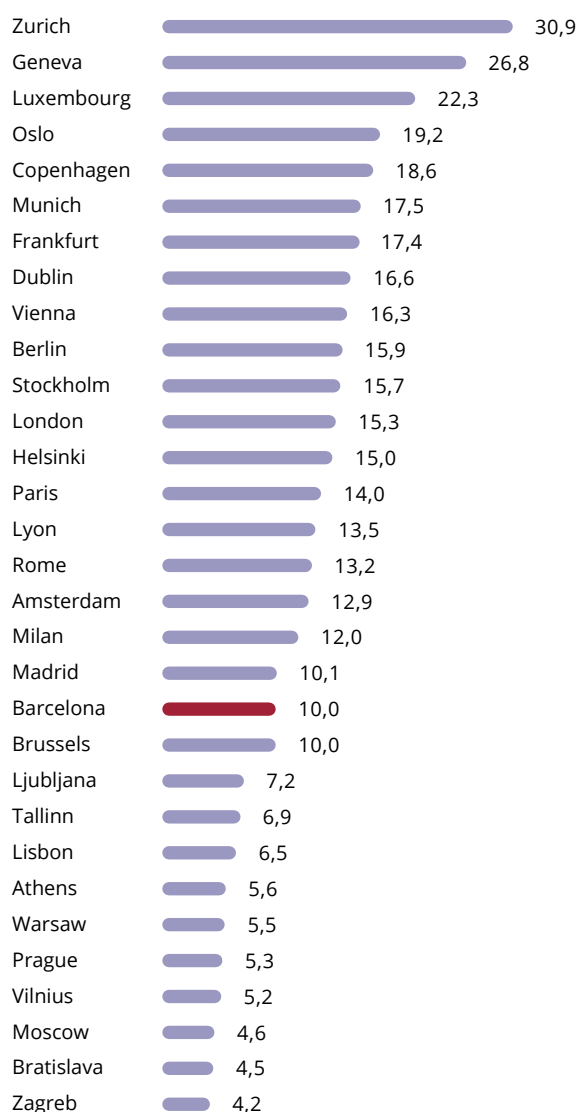


According to the *Prices and Earnings 2018* report, which UBS conducts every three years and which compares the salary levels of 77 cities around the world, Barcelona ranked 30th in terms of gross salary. However, if the net salary is taken into account, Barcelona drops to 35th place, with a net salary of \$10 per hour, identical to cities like Madrid and Brussels.

Between 2015 and 2018, the gross salary level in Barcelona increased in relation to the city of reference, which is New York, a trend that is shared with the main benchmark European cities, as a consequence of the economic recovery, the increase in inflation and the appreciation of the euro. The result is that Barcelona maintains the same place in the worldwide ranking for salaries that it had in 2015 (30th in the worldwide ranking), and 20th place if only the 37 European cities are taken into account. Therefore, Barcelona is at the medium-low end in Europe, below Munich, Berlin, Dublin, Amsterdam, Lyon and Milan, and many others, but above cities like Lisbon and Prague, and very much in line with Madrid.

The increase in net salaries in Barcelona for the period analysed (i.e. after taxes and Social Security contributions) is less significant than if it is analysed in terms of gross salary, differentiated by income tax, compared with the city of reference (New York).

Net salary per hour in the main European cities. 2018 (€)



NB: Net salary is calculated after taxes and contributions to the Social Security.

Source: Prices and Earnings 2018, UBS.

Salary levels in cities around the world. 2018

Ranking	City	Net salary	Gross salary	Ranking	City	Net salary	Gross salary
1	Geneva	133.1	131.5	31	Madrid	50.0	58.3
2	Zurich	153.8	129.8	32	Tel-Aviv	61.8	55.5
3	Luxembourg	110.9	111.3	33	Taipei	62.8	50.6
4	Los Angeles	107.8	101.7	34	Nicosia	62.7	50.3
5	Copenhagen	92.3	101.3	35	Manama	66.8	50.1
6	Oslo	95.4	100.6	36	Dubai	56.0	41.1
7	New York	100.0	100.0	37	Ljubljana	35.7	40.7
8	Miami	103.1	91.8	38	Seoul	46.0	40.0
9	Vienna	81.2	89.7	39	Riyadh	43.9	34.0
10	Chicago	94.9	89.6	40	Lisbon	32.4	32.1
11	Toronto	87.3	86.7	41	Doha	46.0	32.1
12	Munich	87.0	86.3	42	Tallinn	34.5	30.5
13	Stockholm	78.1	85.8	43	São Paulo	34.5	30.2
14	Frankfurt	86.4	85.7	44	Athens	28.1	30.0
15	Montreal	73.5	80.9	45	Santiago, Chile	34.7	29.5
16	Sydney	90.8	80.2	46	Warsaw	27.1	26.7
17	Tokyo	85.3	79.2	47	Prague	26.4	26.7
18	Berlin	79.0	77.3	48	Panama	31.2	26.4
19	Dublin	82.5	76.9	49	Zagreb	20.8	25.3
20	Helsinki	74.5	75.2	50	Rio de Janeiro	29.5	25.2
21	Amsterdam	64.2	73.9	51	Johannesburg	27.8	25.0
22	Rome	65.9	72.2	52	Buenos Aires	23.7	24.1
23	Paris	69.4	68.6	53	Vilnius	26.1	24.0
24	London	76.0	68.5	54	Bratislava	22.6	21.5
25	Auckland	78.4	67.1	55	Bucharest	17.8	21.2
26	Lyon	67.0	66.5	56	Kuala Lumpur	24.0	20.5
27	Milan	59.5	65.2	57	Budapest	18.8	19.7
28	Brussels	49.5	61.9	58	Shanghai	22.1	19.3
29	Hong Kong	72.4	60.3	59	Lima	20.7	18.6
30	Barcelona	49.6	58.4	60	Riga	18.9	18.5

NB: NB: Net salary is calculated after taxes and Social Security contributions, and expressed as an index considering the New York salary equal to 100..

Source: Prices and Earnings 2018, UBS.



SUMMARY OF RESULTS

Summary of results

2019 saw the economy of the city of Barcelona show positive development in terms of economic activity and employment, albeit less intensely than in previous years, marking the sixth consecutive year (2014–2019) in which its annual activity growth outperformed that of the Eurozone. In 2020 the Covid-19 pandemic has triggered a financial crisis with an unprecedented global reach and a situation of great uncertainty. The forecasts for 2020 are a steep fall in Catalonia's economic activity which, like that of Spain, is expected to continue to develop less favourably than the Eurozone as a whole, in the midst of a crisis that is hitting the economies of southern Europe particularly hard. Despite this situation, Barcelona has proven to be resilient enough to remain attractive to investors and maintain its good economic and business positioning in Europe and worldwide, as the 35 indicators included in the Barcelona Observatory's *2020 Report* show.

For the fifth year running, Barcelona is among the 25 most competitive cities in the world, according to the Mori Memorial Foundation's report *Global Power City Index 2020*, where it is placed 21st in the world and 9th in Europe. Similarly good results in terms of figures and rankings are also observed in the majority of the other indicators analysed in the section on the **economic activity hub**. In this sense, Barcelona has also reaffirmed its status as a benchmark tech hub in Europe, coming 8th among cities with the most promising prospects for tech start-ups and 2nd among those with the best strategy for attracting foreign investment in this sphere in the first *Tech Cities of the Future* ranking (2020–21), according to fDi Intelligence. Moreover, the Resonance Consultancy ranking *World's Best Cities 2021*, which assesses the quality and attractiveness of cities from various perspectives, puts Barcelona at 8th in the world, ahead of San Francisco, Amsterdam and Berlin. Other indicators reaffirm Barcelona's appeal for doing business and the city's positive image abroad. For example, the confidence it generates among international investors is borne out by the fact that it is the 2nd city in southern Europe as regards perspectives for 2020–2021, the 10th city in Europe in terms of economic potential and the 3rd in connectivity between major European cities, according to the report *fDi Cities and Regions of the Future 2020/21* (Financial Times group). Likewise, Barcelona is the 9th most attractive city for international investors according to EY's *Attractiveness Survey Europe 2019*.

2020 continues to be especially marked by the impetus of the United Nations 2030 Agenda and its 17 sustainable development goals (SDGs), with which Barcelona City Council's municipal policies for the 2019–2023 mandate are in alignment. In the section on **quality of life, social cohesion and sustainability**, with regard to the dimension associated with good quality of life, Barcelona is considered to be the 26th safest city in the world according to the *Safe Cities Index 2019* and stands out as an international benchmark in the field of sport, achieving 7th position on the *Ranking of Sports*

Cities 2020. Additionally, the city is a benchmark due to its cultural and creative vitality, ranking in 9th place in Europe accordance to the results of the *Cultural and Creative Cities Monitor 2019* and stands out in the scopes of human capital and training and employment in creative and knowledge-intensive activities (2nd and 5th, respectively, among cities with more than a million inhabitants). However, in 2020 the Covid-19 pandemic has had a widespread negative impact on the quality of life and job market in all the world's cities. Accordingly, Barcelona has fallen from 8th to 35th place among the world's cities with the best balance between work and personal life, according to the ranking of the *Cities for the Best Work-Life Balance 2020*, where, in any case, the city continues to stand out in the areas of tolerance and inclusion (where it comes 5th), number of holidays (1st), social expenditure (13th) and well-being and physical fitness (13th). In the scope of social cohesion, in 2019 the risk of poverty or social exclusion rate of the entire population of Catalonia was below the EU's, with both having dropped slightly with respect to the previous year. As for sustainability, Barcelona is among the 88 cities most committed to the fight against the climate emergency and heads, together with Oslo, the classification of cities with fewest emissions per capita, according to the C40 Cities Climate Leadership Group. As regards sustainable mobility, Barcelona as a city came 18th in the world and 9th in Europe in its development of an urban public-transport ecosystem according to the *Urban City Readiness Index 2020* report from the University of Berkeley and the Oliver Wyman Forum, while it is the 13th most bicycle-friendly city according to the *Copenhagenize Index 2020*.

In terms of **employment**, in 2020 the financial crisis brought about by pandemic is strongly affecting the job markets of the world's leading economies. Jobs in Spain, Catalonia and Barcelona have shown a year-on-year decrease of 2% to 3.5%. The crisis has been especially harsh to workers on temporary contracts, in sectors such as the hotel and restaurant industries and retail trade, and – on a regional level – to countries in the south and east of Europe. With regard to the evolution of the indicators in 2019, Catalonia shows positive development, closing the year with a year-on-year increase in employment of 87,000 people and at the same time a year-on-year decrease in unemployment of almost 46,000 people, according to the INE (National Statistics Institute of Spain), but Catalonia's employment rate is below the European average and the unemployment rate is significantly higher than the EU average, even though it has been decreasing since 2013. In regard to **higher education**, Barcelona continues to be one of the benchmark European cities for business studies, given that it is the only city in Europe with two educational centres (IESE and ESADE) among the seven best European business schools in 2020, according to the Financial Times. The city is also notable for a significant critical mass in **qualified human capital**, and in 2019 the number of workers with university qualifications increased from 46.9% to 48.4%, according to Eurostat. Barcelona is

also among the five most attractive cities for digital talent wanting to work abroad, according to BCG's *Decoding Global talent 2019* report.

In the scope of **knowledge and technology**, with regard to the tech entrepreneurship and start-up ecosystem, various recent rankings put Catalonia's capital in leading positions and in many cases it has managed to maintain or improve its position despite the situation generated by the pandemic, demonstrating its resilience in this field. Barcelona has maintained its position as Europe's fifth largest start-up hub in 2020, according to the EU-Startups classification, and it is also ranked as the 5th start-up hub in terms of the number of operations and the 16th hub in terms of attracting investment, according to the *State of European Tech 2020* report issued by the Atomico consultancy. Accordingly, the Catalan capital has the 27th best emerging tech company ecosystem in the world in 2020 according to the *StartupBlink Ecosystem Ranking*, while the *Global Startup Ecosystem Report 2020* issued by Startup Genome ranks its emerging ecosystem as the 6th best in the world and the 3rd best in Europe. These results are strengthened by an excellent workforce in the high added value sectors and by the high volume of scientific research that is carried out. Catalonia ranks in 4th place in Europe in terms of population with higher education working in scientific or technological activities with more than 940,000 people employed in this scope, and in 5th place in terms of the population in high- and medium-high-technology manufacturing sector employment and 9th in knowledge-intensive services and cutting-edge technology. Barcelona is also ranked 5th in Europe and 23rd in the world for scientific academic production, according to the Knowledge Cities Ranking 2019, produced by the UPC's Centre of Land Policy and Valuations.

In 2020 the outbreak of Covid-19 has had a strong impact on activity in the **tourism sector**. This situation has interrupted the positive development experienced in tourism in Barcelona in 2019, when it registered record-breaking figures. Nevertheless, Barcelona's good position as an international tourist destination is reflected in the key benchmark rankings for the sector. Barcelona has the 7th best brand according to the *Saffron City Brand Barometer 2020*, which ranks cities' assets and their reputation as international tourist destinations. In 2019, for the third consecutive year, Barcelona was 8th among the European cities preferred by international visitors, despite dropping five places to 36th in the global rankings, according to *Top Cities Destination Ranking 2019*, a Euromonitor International report. As regards MICE tourism, 2019 saw Barcelona hold on to first place in the world in number of delegates and fourth in meetings, according to the International Congress and Convention Association (ICCA) ranking. This strong performance in terms of the city's tourist activity was strengthened by the good quality of the main points of entry for international tourists, which registered

record-breaking figures: the Port of Barcelona and Josep Tarradellas Barcelona-El Prat airport. After 19 consecutive years, the city's port was still leader in the Mediterranean and Europe for cruise-ship passenger traffic, with over 3 million people in 2019. And the airport set a new transport record by breaking the threshold of 52 million passengers in 2019, according to Aena data, placing it in 6th position in Europe for the first time and 8th in terms of growth among the top 25 airports.

Over the course of this last year marked by Covid-19 the main **prices and costs** indicators registered a decrease in the price of housing, stability in the price of offices and an increase in the price of logistics land in Barcelona and its surrounding area with respect to the previous year. In spite of this, the city is still considered to be attractive and competitive in the scope of companies and business compared to other cities around the world, because downward trends and stability have been predominant in 2020. Consequently, Barcelona's position within the wider European context varies according to the market, being in the medium-low range in housing rentals, average in the office market and high in the case of logistics space. In line with the reduction in prices, in 2020 Barcelona gained competitiveness after falling in the world ranking of cities with the highest cost of living, according to Mercer Human Resource Consulting. This is the third consecutive year that it has dropped places at a global level and the first year since 2015 that it has done so among cities in the Eurozone (going from 14th to 15th position). In relation to taxation, Spain is in line with the EU average regarding tax rates. Corporate tax remains at 25%, a figure that has not changed since 2016. As far as social contributions are concerned, there is a considerable difference between the rate paid by the worker (one of the lowest in the area) and that paid by the company (one of the highest). Only if the average of both were taken into account would Spain be in an intermediate position compared to other EU countries.

This is tenth consecutive year in which the Barcelona Observatory has issued its monograph ***Business climate in the Barcelona Metropolitan Area (AMB)***. It analyses the evolution of activity in the first three quarters of 2020 and provides a forecast for the fourth quarter of the same year based on the results of the *Business Climate Survey* for the Barcelona Metropolitan Area (AMB), which is jointly prepared by the Idescat and Barcelona Chamber of Commerce. The survey shows the effects of the economic crisis brought about by Covid-19, which in general have been more deeply felt in Barcelona than in Catalonia as a whole. The development of business has suffered a strong decrease, especially in the second quarter due to the lockdown, and hospitality is the industry most affected by Covid-19 according to the business community.

Summary of results

									
	Global competitiveness	Tech cities of the future	Foreign investment projects	Early-stage entrepreneurial activity ^{1,3}	Attractive cities for visitors and entrepreneurs	Organisation of international congresses	Safe cities	Sports cities	Work-life balance
	2020	2020	2018	2019	2021	2019	2019	2020	2020
1	London	London	London	Brazil	London	Paris	Tokyo	New York	Oslo
2	New York	Paris	Paris	Canada	New York	Lisbon	Singapore	London	Helsinki
3	Tokyo	Dublin	Singapore	United States	Paris	Berlin	Osaka	Paris	Copenhagen
4	Paris	Amsterdam	Dubai	Slovakia	Moscow	Barcelona	Amsterdam	Los Angeles	Hamburg
5	Singapore	Berlin	New York	Israel	Tokyo	Madrid	Sydney	Lausanne	Berlin
6	Amsterdam	Munich	Shanghai	Ireland	Dubai	Vienna	Toronto	Tokyo	Munich
7	Berlin	Bucharest	Barcelona	Morocco	Singapore	Singapore	Washington DC	Barcelona	Vienna
8	Seoul	Barcelona	Hong Kong	Netherlands	Barcelona	London	Copenhagen	Manchester	Zurich
9	Hong Kong	Belfast	Düsseldorf	Switzerland	Los Angeles	Prague	Seoul	Toronto	Stockholm
10	Shanghai	Cambridge	São Paulo	United Kingdom	Madrid	Tokyo	Melbourne	Madrid	Calgary
11	Sydney	Madrid	Madrid	China	Rome		Chicago	Boston	Ottawa
12	Los Angeles	Stockholm	Amsterdam	Taiwan	Chicago		Stockholm	Copenhagen	Amsterdam
13	Madrid	Frankfurt	Tokyo	Catalonia	Toronto		San Francisco		Vancouver
14	...	Zurich	Dublin	Sweden	San Francisco		---		---
15	21 Barcelona	Warsaw	Sydney	Greece	Abu Dhabi		26 Barcelona		35 Barcelona

¹ The ranking refers to a selected sample ² The ranking refers to regions or provinces ³ The ranking refers to countries ⁴ Ranking runs from low to high values




								
Creative and cultural cities	Rate of risk of poverty or social exclusion ^{1,2,4}	tCO ₂ emissions ^{1,4}	Urban public transport ecosystem	Attractive cities for digital talent	Employment rate ^{1,2}	Part-time employment rate ^{1,2}	Unemployment rate ^{1,2,4}	Workers with university studies ^{1,2}
2019	2019	2020	2020	2019	2019	2019	2019	2019
Paris	Prague	Oslo	Singapore	London	Munich	Amsterdam	Prague	London
Munich	Bratislava	Barcelona	London	New York	Stockholm	Rotterdam	Munich	Oslo
London	Helsinki	Rijeka	Stockholm	Berlin	Stuttgart	Vienna	Stuttgart	Bilbao
Milan	Bucharest	Paris	Hong Kong	Amsterdam	Prague	Frankfurt	Frankfurt	Brussels
Berlin	Stockholm	Copenhagen	Amsterdam	Barcelona	Amsterdam	Stuttgart	Amsterdam	Helsinki
Vienna	Milan	Genoa	Tokyo	Dubai	Oslo	Berlin	Edinburgh	Paris
Budapest	Munich	Naples	Helsinki	Los Angeles	Copenhagen	Edinburgh	Hamburg	Dublin
Prague	Oslo	Madrid	Berlin	Paris	Rotterdam	Munich	Rotterdam	Stockholm
Barcelona	Warsaw	Bilbao	Paris	Sydney	Frankfurt	Copenhagen	London	Copenhagen
Hamburg	Copenhagen	Valencia	New York	Abu Dhabi	Edinburgh	Manchester	Tallinn	Madrid
Madrid	Amsterdam	Murcia	San Francisco	Tokyo	Helsinki	Oslo	Dublin	Edinburgh
Warsaw	Lisbon	London	Chicago	Toronto	Berlin	London	Manchester	Amsterdam
Cologne	Barcelona	Stockholm	Boston	San Francisco	London	Brussels	Copenhagen	Budapest
Rome	Madrid	Nice	---	Zurich	---	---	---	---
Lyon	Dublin	Lisbon	18 Barcelona	Singapore	Barcelona	Barcelona	Barcelona	Barcelona

¹ The ranking refers to a selected sample

² The ranking refers to regions or provinces

³ The ranking refers to countries

⁴ Ranking runs from low to high values

									
	Business schools	Start-up hubs	Preferred cities for establishing a start-up	Innovative cities	Scientific production	People employed in high and medium-high technology manufacturing ²	Science and technology workers ²	Airport passengers	International tourists
	2020	2020	2019	2019	2019	2019	2019	2019	2019
1	Fontainebleau Insead	London	London	New York	Beijing	Stuttgart	Paris	London Heathrow (LHR)	Hong Kong
2	London London Business School	Berlin	Berlin	Tokyo	Shanghai	Milan	Madrid	Paris-Roissy (CDG)	Bangkok
3	Paris HEC Paris	Paris	Barcelona	London	London	Munich	Istanbul	Amsterdam (AMS)	Macau
4	Barcelona IESE Business School	Amsterdam	Paris	Los Angeles	Nanjing	Istanbul	Barcelona	Frankfurt (FRA)	Singapore
5	Cambridge University of Cambridge Judge	Barcelona	Amsterdam	Singapore	New York	Barcelona	Warsaw	Madrid (MAD)	London
6	Oxford University of Oxford Said	Munich	Lisbon	Paris	Boston	Bologna	Lyon	Barcelona (BCN)	Paris
7	Barcelona ESADE Business School	Madrid	Munich	Chicago	Seoul	Turin	Milan	Istanbul (IST)	Dubai
8	Lausanne IMD	Stockholm	Milan	Boston	Guangzhou	Karlsruhe	Munich	Moscow Sheremetyevo (SVO)	Delhi
9	Milan SDA Bocconi	Dublin	Tallinn	San Francisco San José	Tokyo	Tübingen	Seville	Munich (MUC)	Istanbul
10	Coventry Warwick Business School	Milan	Stockholm	Toronto	Paris	Düsseldorf	Berlin	London-Gatwick (LGW)	Kuala Lumpur
11	Manchester Alliance Manchester Business School	Copenhagen		Melbourne	Wuhan	Paris	London	Roma-Fiumicino (FCO)	New York
12	London City University of London Cass	Tallinn		Berlin	Xi'an	Bursa, Eskişehir Bilecik	Stuttgart	Antalya (AYT)	Antalya
13	Madrid IE Business School	Zurich		Dallas-Fort Worth	Chengdu	Frankfurt	Rotterdam	Istanbul-Sabiha Gökçen (SAW)	Mumbai
14	London Imperial College Business School	Helsinki		---	---	Katowice	Rome	Dublin (DUB)	---
15	Durham Durham University Business School	Hamburg		21 Barcelona	23 Barcelona	Cologne	Cologne	Paris-Orly (ORY)	36 Barcelona

¹ The ranking refers to a selected sample ² The ranking refers to regions or provinces ³ The ranking refers to countries ⁴ Ranking runs from low to high values

 Cruise passengers on the Mediterranean	 Cost of living	 Corporation tax ^{1,3}	 Office rental prices	 Retail premises rental prices	 Logistics land rental prices	 Housing rental prices	 Salary levels
2019	2020	2020	2020	2019	2020	2020	2018
Barcelona	Hong Kong	Japan	London (WE)	Hong Kong Causeway Bay	London (Heathrow)	London	Geneva
Balearic Islands	Ashgabat	India	Paris (CBD)	New York Upper 5 th Avenue	Geneva	Zurich	Zurich
Civitavecchia	Tokyo	Germany	Geneva	London New Bond Street	Zurich	Geneva	Luxembourg
Genoa	Zurich	Argentina	London (City)	Paris Avenue des Champs-Élysées	Oslo	Dublin	Los Angeles
Marseilles	Singapore	Australia	Stockholm	Milan Via Montenapoleone	Stockholm (South)	Amsterdam	Copenhagen
Venice	New York	Belgium	Zurich	Tokyo Ginza	Helsinki	Luxembourg	Oslo
Naples	Shanghai	France	Dublin	Sydney Pitt Street Mall	Dublin	Haarlem	New York
Piraeus	Bern	South Africa	Luxembourg	Zurich Bahnhofstrasse	Luxembourg	Lausanne	Miami
Tenerife	Geneva	United States	Milan	Seoul Myeongdong	Munich	Copenhagen	Vienna
Valletta	Beijing	Canada	Paris (La Défense)	Vienna Kohlmarkt	Amsterdam (Schiphol)	Oxford	Chicago
Livorno	Seoul	Austria	Frankfurt	Beijing Wangfujing	Bristol	Munich	Toronto
Corfu	Tel-Aviv	South Korea	Rome	Munich Kaufinger/Neuhauser	Barcelona	Silema	Munich
Dubrovnik	Shenzhen	Barcelona	Moscow	Dublin Grafton Street	Gothenburg (Arendal)	Reykjavík	Stockholm
Bari	...	Netherlands	...	Athens Ermou	Manchester
French Riviera ports	102 Barcelona	Tunisia	28 Barcelona	Barcelona Portal de l'Àngel	Copenhagen	41 Barcelona	Barcelona

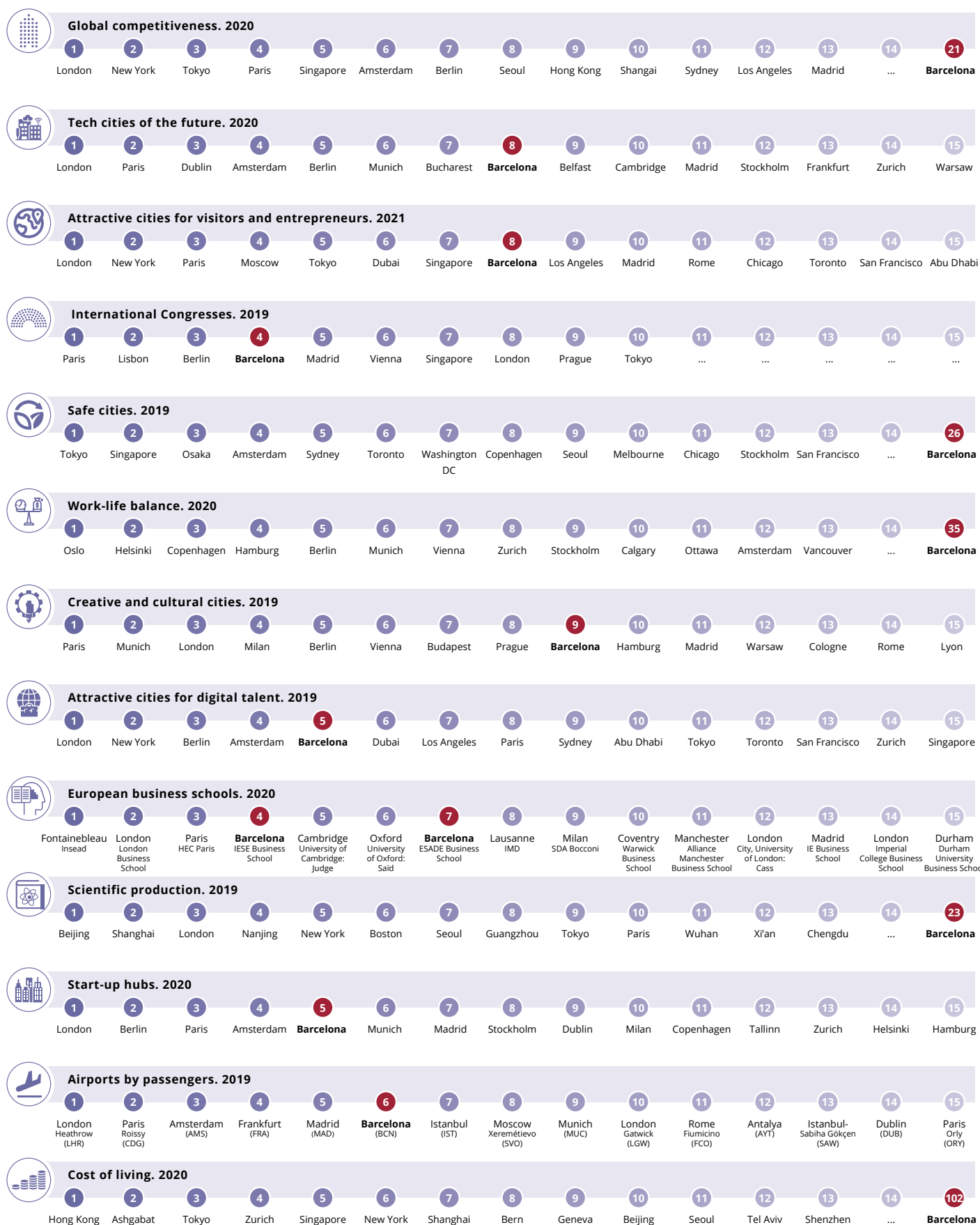
¹ The ranking refers to a selected sample

² The ranking refers to regions or provinces

³ The ranking refers to countries

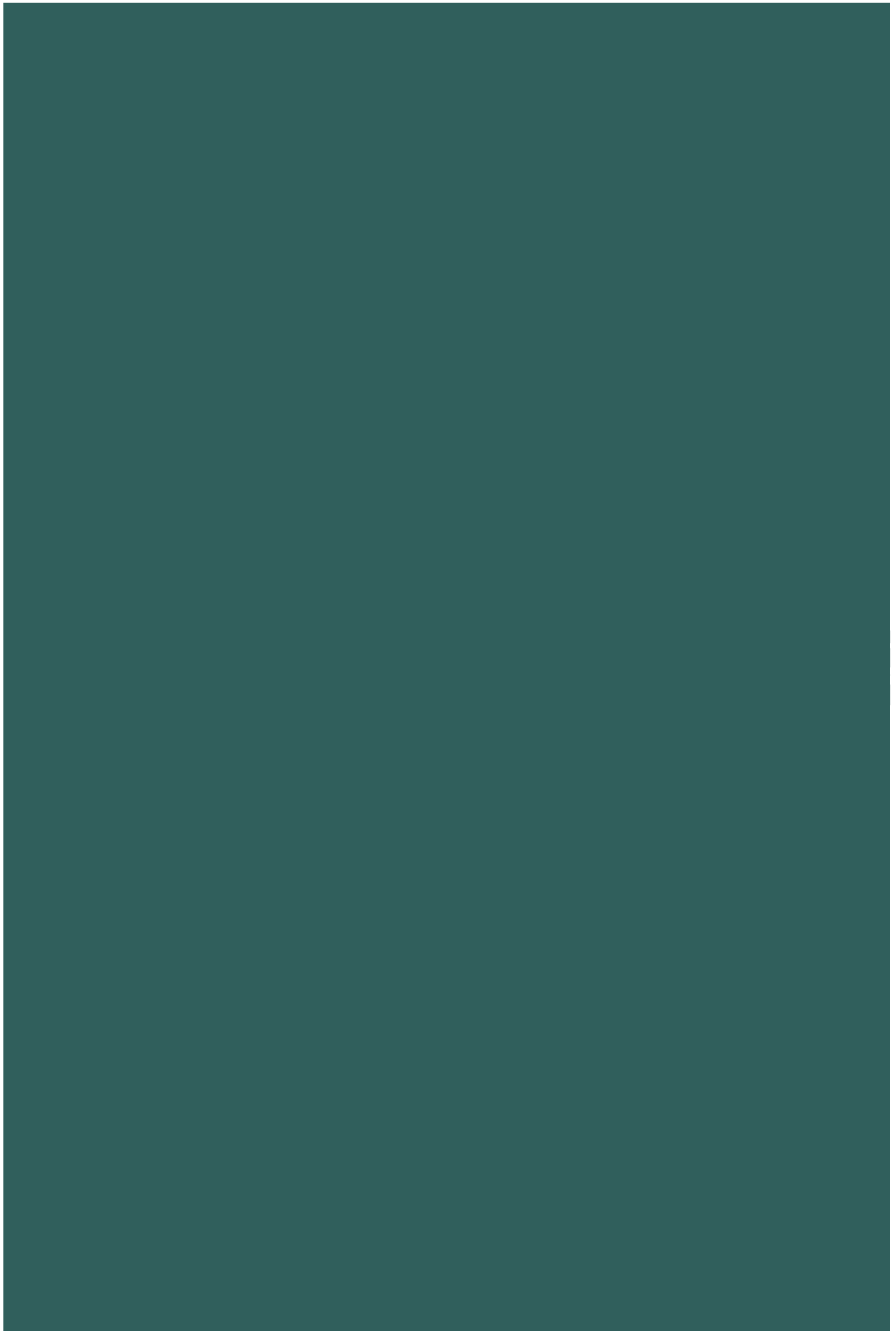
⁴ Ranking runs from low to high values

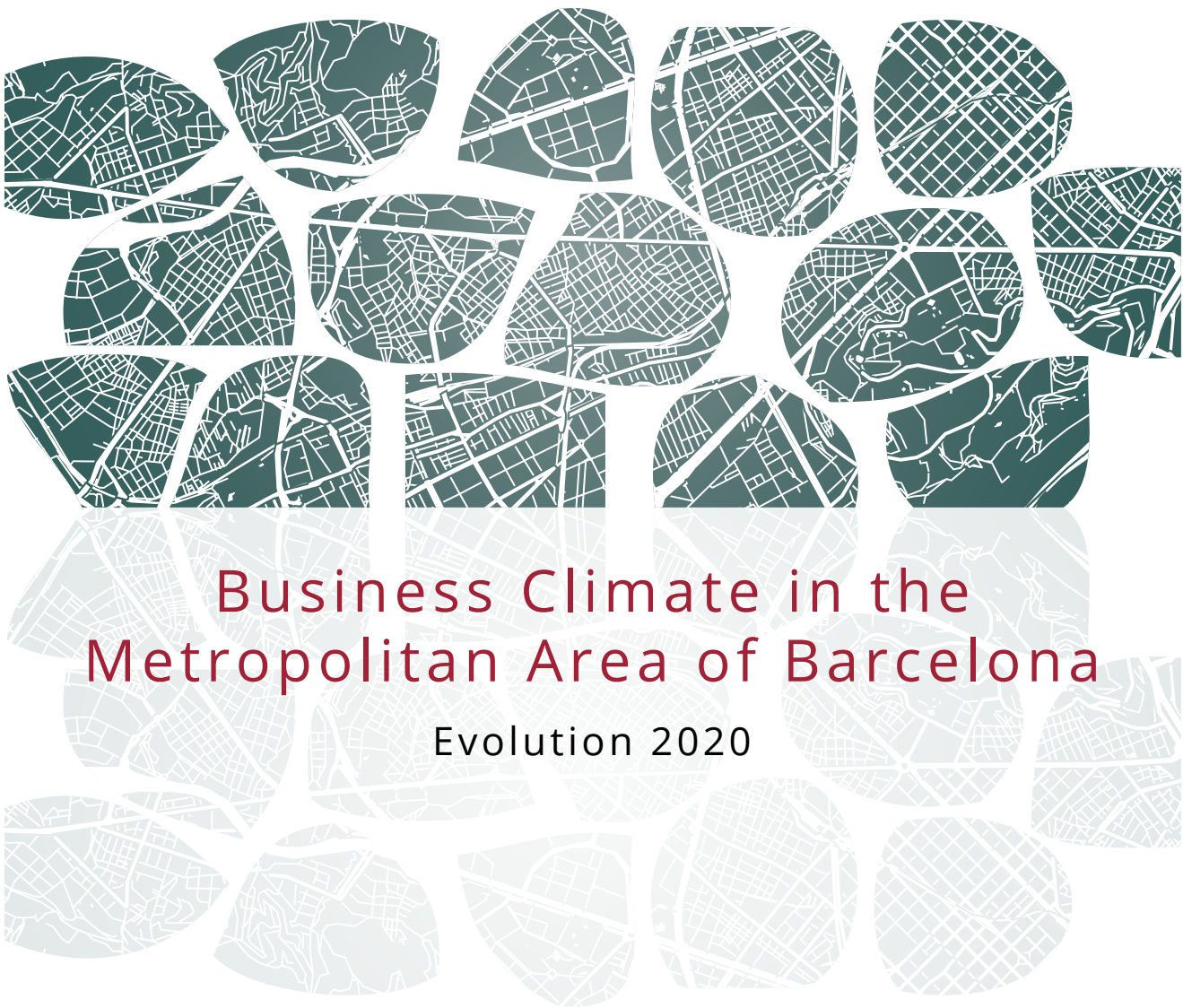
Positioning of Barcelona in international cities rankings





SPECIAL REPORT





Business Climate in the Metropolitan Area of Barcelona

Evolution 2020

Executive Summary



Sharp contraction in business performance in 2020

The *Business Climate Survey* for the Barcelona Metropolitan Area shows the effects of the economic crisis brought about by Covid-19, which in general have been more profound than for Catalonia:

- Business performance deteriorated notably in 2020, particularly with the lockdown in the second quarter. The impact has been greater than in 2009.
- Sales prices have fallen, although this is the variable that has seen the smallest drop of the three considered.
- Despite public aid, the labour market has contracted significantly, although less markedly than business performance.

Hospitality is the sector most affected by Covid-19 according to business owners

In the context of a widespread sharp downturn, the nature of the restrictions has led to a steeper fall in the hospitality service sector:

- Hospitality recorded the greatest fall in the historical series in Q2 of 2020, with 100% of business owners saying their business performance had been negative.
- Despite the fact that construction was the second worst affected sector, there was a sharp deceleration in the fall in Q2 and Q3.
- Industry sits somewhere in the middle with regard to the impact on business performance, but has recorded fewer negative results in price and employment levels.
- The impact on the commerce sector and other services has been fairly similar and slightly above the average.



Negative forecast for the fourth quarter

The great uncertainty around the way Covid-19 is evolving and the economic consequences it entails have led to very negative forecasts for business performance although less negative than in the previous quarters. The sector with the least negative results is commerce, and at the other end of the scale is hospitality.

Likewise, employment forecasts are negative in all activity sectors, albeit with nuances. Whilst commerce is making a good recovery and all other activity sectors remain stable in relation to the previous quarter, construction is the only sector where business owners foresee a downturn in the labour market (a trend that has been observed in previous years but less marked than this year).



The reduced workforce is one of the three factors that most hinder business performance

Factors that limited good business performance in 2019:

- Weak demand and increased competition were the factors most widely mentioned by business owners in the metropolitan area.
- The difficulty in finding the right workforce gained a lot of weight between 2014 and 2019 and established itself as the third greatest limitation on business performance.
- In last place, financing difficulties has lost relevance in the years since the economic recovery, having peaked in 2012.

Business performance. Evolution and prospects

The AMB as a whole

The Catalan economy experienced slower growth in 2019, increasing by 1.9%, and below 2% for the first time since the start of the economic recovery in 2014, according to Idescat. The economy remained above the average for the eurozone countries, which also experienced a slowdown. The key factors conditioning this global slowdown were the trade war between the United States and China, tensions and instability in some emerging countries, the industrial crisis, uncertainty over the Brexit outcome and the advance of certain economies towards more mature phases of the cycle.

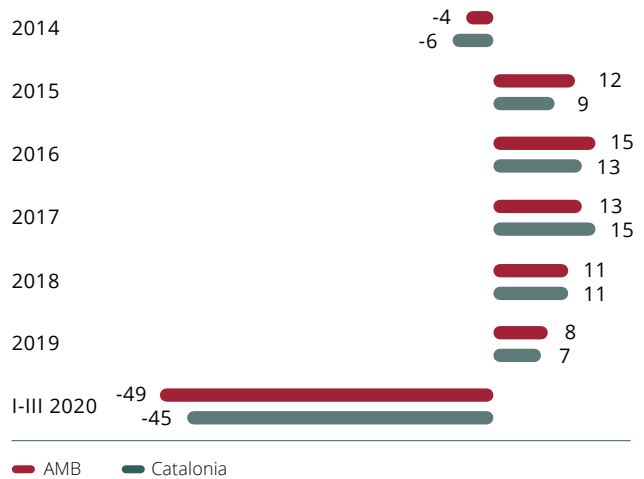
However, in 2020, marked by the arrival of the Covid-19 pandemic, these factors have been relegated, giving way to the following priorities: managing the health crisis whilst awaiting vaccines and cures, and tackling the economic and social impact in order to preserve the productive fabric. According to estimates from the Barcelona Chamber of Commerce, the Catalan economy is expected to contract by 12.7% in 2020. The lockdown in the second quarter of the year, the restrictions on mobility and activity which have been imposed intermittently over the rest of the year due to outbreaks, and the global nature of the crisis have affected private consumption, investment and international trade.

On the supply side, construction and services recorded a positive balance in 2019, while industry contracted slightly due to the domestic crisis. Over the last year, the pandemic has affected the sectors in a decidedly unequal way. The worst affected sector is services, with the fall in tourism and the closure and restrictions on the activity of restaurants, shops and other establishments for a large part of the year. For all these reasons, a 15.1% fall is forecast for 2020. The contraction of the industrial sector will be 7.3% and comes on top of the negative evolution it had experienced at the close of 2019. Despite the fact that purchases of essential goods have remained stable, agriculture will also close the year with negative growth, followed by construction, which was amongst the first of the sectors to show signs of recovery with the easing of restrictions. As regards demand, exports and investment closed 2019 with significant increases while there was a slump in private consumption. For 2020, it is expected that exports will be down more than 20% and investment more than 17%. There will be a smaller fall in private consumption and only public consumption will close the year with positive growth.

Within this economic context, **business performance** evolved positively in 2019 as a whole, but with a marked slowdown in the Barcelona Metropolitan Area and Catalonia according to figures from the Business Climate Survey from

Annual business performance across the whole of the economy¹

(balances², in %)

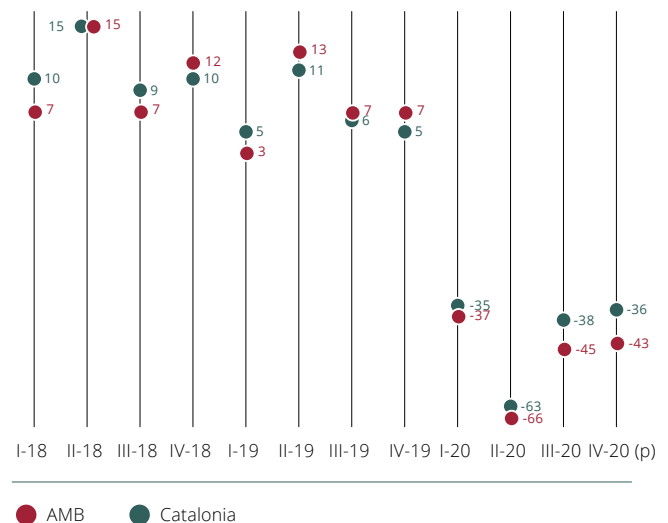


Source: Barcelona Chamber of Commerce and Idescat (Statistical Institute of Catalonia).

1. The results for the economy as a whole are the aggregate of the results for industry, construction, commerce, hospitality and other services. Results for Spain have not been presented in the survey since 2013, because they are not available. The INE (Spanish Statistical Office) only publishes the results of the Business Climate Indicator, compiled for Spain as a whole and by sector.
2. The balance is the difference between the percentage of business establishments which state that the analysed variable has been positive and the percentage of establishments that state that it has been negative. It should be noted that, in the case of the hospitality sector, the balances present seasonal differences, but the series are too short to divide by season.

Quarterly evolution of business performance

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

the Barcelona Chamber of Commerce and Idescat. As regards 2020, the crisis has impacted activity with a sharp fall in business performance in the first three quarters of the year – particularly in Q2, and has been felt more deeply in the Barcelona Metropolitan Area than in the territory as a whole due to the weight of Barcelona and its greater dependence on the exterior. The forecasts for Q4 indicate stability in relation to the previous quarter and, therefore, a large degree of pessimism in business performance due to the uncertainty over how the pandemic will unfold and how it will impact on activity.

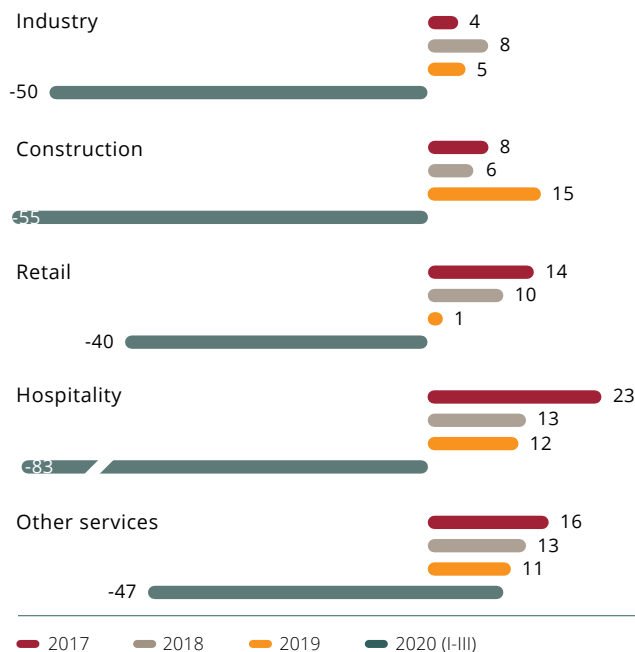
Economic sectors

2019 was marked by less intense growth overall in economic activity according to business owners, although the trend varied by sector. The decisive cooling of business performance was experienced by commerce which saw a considerable reduction in the balance (difference between positive and negative responses) which fell from 10% to 1% annually in 2019. In second place, industry recorded a sharp fall in its balance from 8% to 5% as a result of the downturn in the second half of the year. Following this, the balance of all other services was down by 2 percentage points to 11% in 2019, followed by hospitality which overall remained stable. Construction was the only sector to record notable growth in activity.

As for 2020, the sector that has suffered the most is hospitality, especially in Q2 when, for the first time in the historical series, the lockdown resulted in a balance of -100% across all businesses who scored business performance as unfavoura-

Annual evolution of business performance in the AMB by sectors

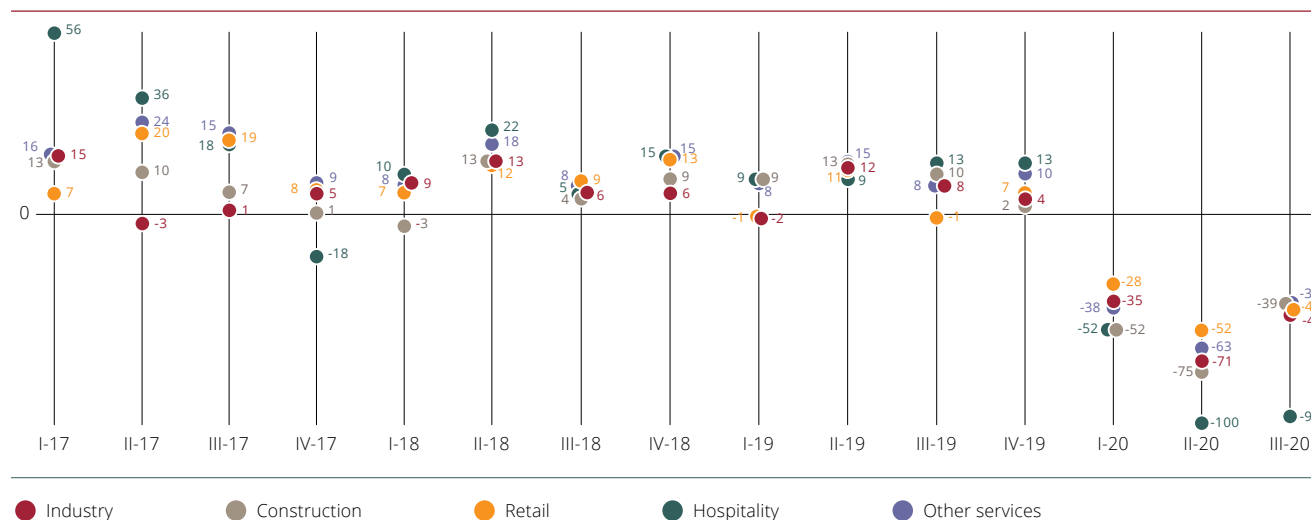
(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

Quarterly evolution of business performance in the AMB by sector

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

ble. In second place, construction presented a worse balance in the first three quarters of the year (-55% on average). After this, industry recorded a balance of -50% followed by other services (-47%) and commerce (-40%), sustained by all the activity linked to the sale of food or essential products, with these businesses remaining open throughout.

For Q4 of 2020, the percentage of business owners who thought that the business performance of hospitality would be negative fell slightly. However, the situation remains rather pessimistic: -78% and a long way off the other sectors with balances of around -40% where only other services presents a less negative balance (-36%). Notwithstanding the above, we need to take into account the high degree of uncertainty there has been in 2020 and which will also mark 2021, such as the effects of a third wave in the first quarter of the year.

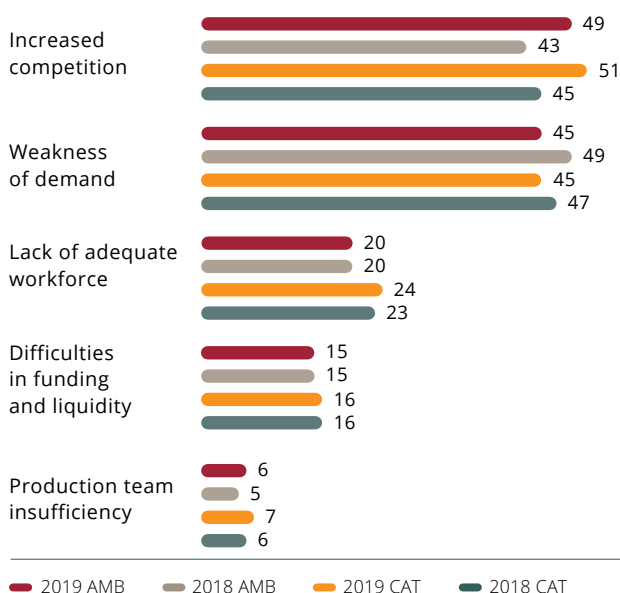
Factors that limited good business performance in 2019

For the whole of the metropolitan economy, **weak demand** was the factor that most limited good business performance in 2019 (last available data, as the factors that limit good business performance only figure in survey questions in the last quarter of the year, referring to the year as a whole). The second factor was increased competition followed by the shortage of qualified workforce. Since 2013, this latter factor has been gaining ground, which points to the need to improve the tailoring of employee training to the needs of businesses, even more so if we consider the level of unemployment, which was particularly high in 2019 compared to the environment. By contrast, with the economic recovery, the problems of liquidity and financing have diminished and are currently the last limiting factors. For 2020, we will need to see what weight the last of these factors has and to what extent the public policies implemented during the Covid-19 pandemic have alleviated the problem of liquidity.

By **sector**, weakness of demand and increased competition were clearly the key limiting factors. The first of these particularly affected industry and other services (with balances of 52% and 46% respectively), and the second impacted on construction and hospitality (52% and 51% in each case). As for commerce, both factors achieved the same balance (60%, a percentage way above the average for the economy for both variables). With regard to the shortages in suitable workforce, construction was once again the sector that stood out with the highest percentage of responses: 31% (10 percentage points above the average), followed by other services (22%) and industry (19%). It should also be pointed out that construction was the sector with the highest balance

Factors that limit good business performance in the economy as a whole

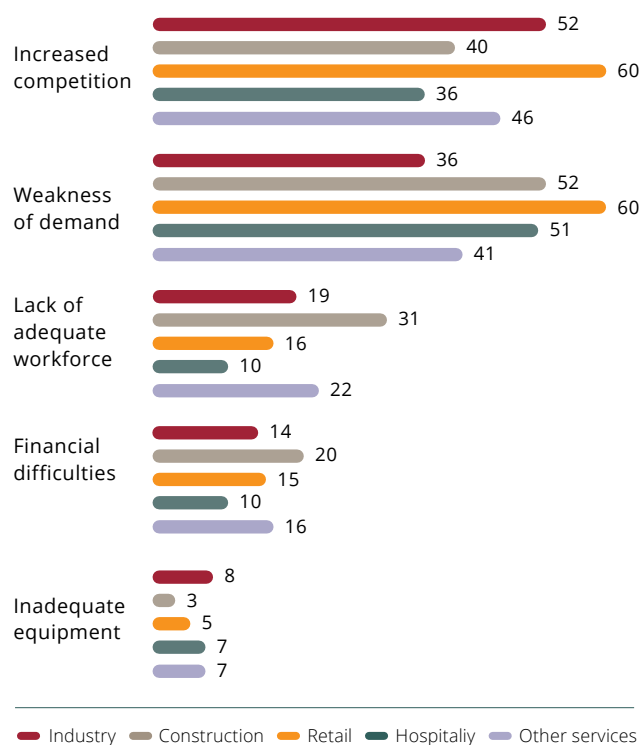
(in %)



Source: Barcelona Chamber of Commerce and Idescat.

Factors that limit good business performance in the AMB by sector. 2019

(in %)



Source: Barcelona Chamber of Commerce and Idescat.

Evolution and prospects of the main business variables

The AMB as a whole

Sales prices fell in the first three quarters of 2020 with a balance of around -13% according to business owners. This is the result of the difference between those that say prices have increased (4%) and those that say they have fallen (17%). The biggest drop was recorded in Q2 with a balance of -19%. For Q4, a price drop similar to the average for the previous three quarters is expected. These results are in line with the deflation of -0.2% expected for the year as a whole in Catalonia, the result of the shock to supply and demand that the economy has suffered due to Covid-19.

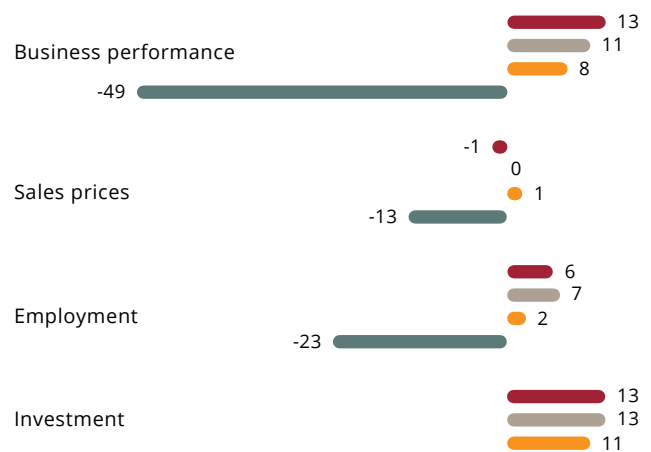
The halt in activity brought about by the pandemic containment measures significantly reduced **employment** from Q1 to Q3 in 2020, and a labour market contraction is expected for the last three months also. On average, the percentage of responses saying it was up was 6% compared to 30% that said it was down, a difference that gives an average balance of -23% – and which reached -35% during the months of lockdown in Q2. In comparison with the previous crisis, it should be noted that the balances from that time were slightly worse: -27% for the same period in 2009. This highlights the role that the ERTA has played in the current crisis in saving jobs. For Q4, a deceleration in the drop in employment is expected with a balance of -13%. Likewise, for Catalonia as a whole, forecasts point to ending the year with an unemployment rate of around 17.5% in 2020.

Investment over the course of 2019 (the latest available data, given that this is a variable that only appears in the Survey in the last quarter of the year for the whole year) has

a positive balance (11%) with 21% of businesses considering that it had increased compared to 11% that said it was down. In 2014, positive balances began to be recorded with the start of the recovery. However, since 2016 the rate of increase has been slowing down. Despite the fact that no data is available for 2020, a notable reduction is expected in gross fixed capital formation in Catalonia (-17.3% in 2020).

Annual evolution of the main business variables in the AMB

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

Quarterly evolution of the main business variables in the AMB

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

Sector results

If analysis is conducted by large economic sectors (up to the third quarter of 2020), they all record balances that are on average negative to a greater or lesser extent, due to the effects of Covid-19, having closed the year with positive balances in 2019. As has been mentioned, hospitality is the sector hardest hit with balances significantly more negative for all the variables analysed, followed by construction. Other services and commerce are the next sectors to have been most badly affected in terms of prices and employment, while industry is the sector that has seen the smallest drops in these two variables from Q1 to Q3 on average, and has the third worst results in terms of business performance.

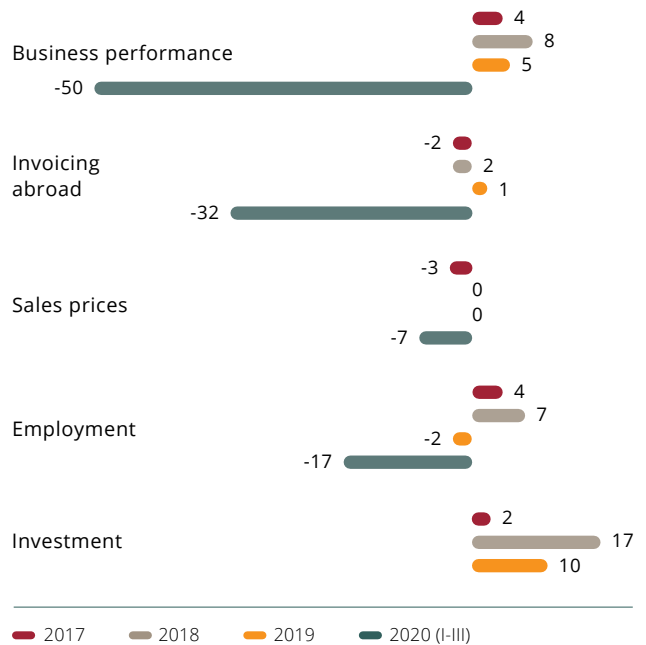
Industry

Covid-19 has affected the business performance of **industry**, leaving the sector in an intermediate position in relation to the rest of the sectors in the metropolitan area, despite a considerable fall. Following a deceleration in 2019, the first three quarters of 2020 closed with a balance of -50% on average, reaching -71% in Q2. During these months, the percentage of business owners who said their performance has been positive has been marginal (8% on average) in comparison with those who say it has been negative (57%). The fall was slower in Q3, but it was not until October that the Index of Industrial Production, for example, recorded a slight increase in annual terms.

With regard to **sales prices**, this was the only sector that recorded a positive balance in Q1 (1%), followed by the neg-

Annual evolution of the main business variables for industry in the amb

(balances, in %)

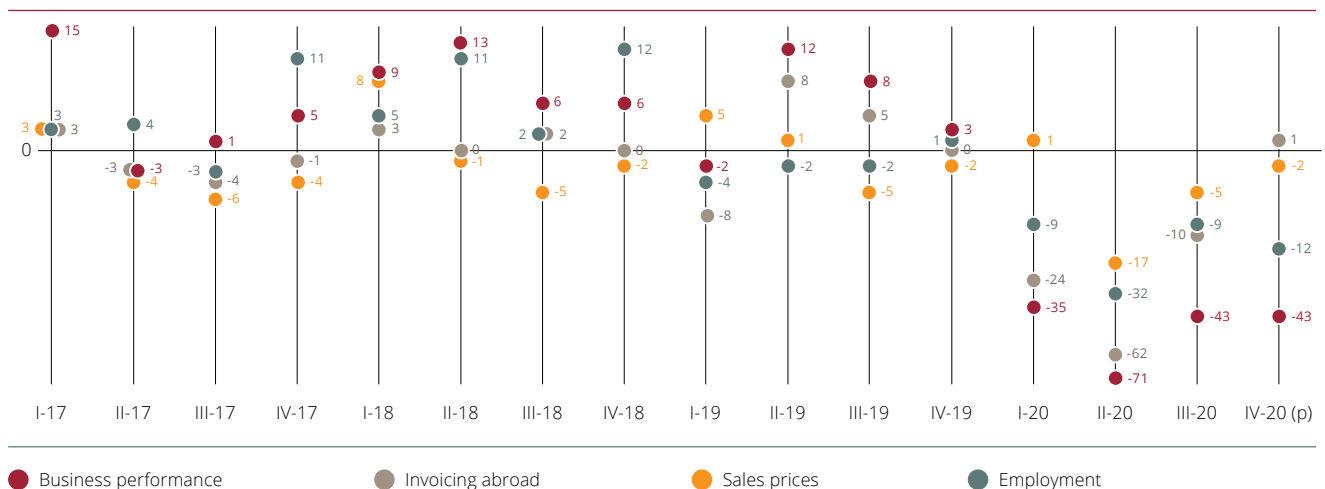


Source: Barcelona Chamber of Commerce and Idescat.

ative results of the three subsequent quarters (-17% in Q2 and -5% in Q3), due to the increase in the number of businesses that said prices had dropped. Despite the negative evolution, this sector recorded the lowest average fall when compared to the rest of the sectors (where the balance for hospitality was as low as -34%). With regard to Q4 2020,

Quarterly evolution of the main business variables for industry in the AMB

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

business owners predict a significant deceleration in the fall in prices.

The balance for **employment**, which was already negative the previous year for the first time since 2015, fell less than the average (-23%) at -17%. For Q4, there was a fall in the number of business owners who said it would increase and those that said it would fall, giving a balance that is negative but stable in relation to the previous quarters. **Overseas sales** experienced a sharp fall in Q2 with the lockdown and closure of borders – the number of businesses that said their turnover was down doubled. However, Q3 saw a notable recovery and the balance went from -41% to -6%. For Q4, a return to positive terrain is expected with a balance of 1%.

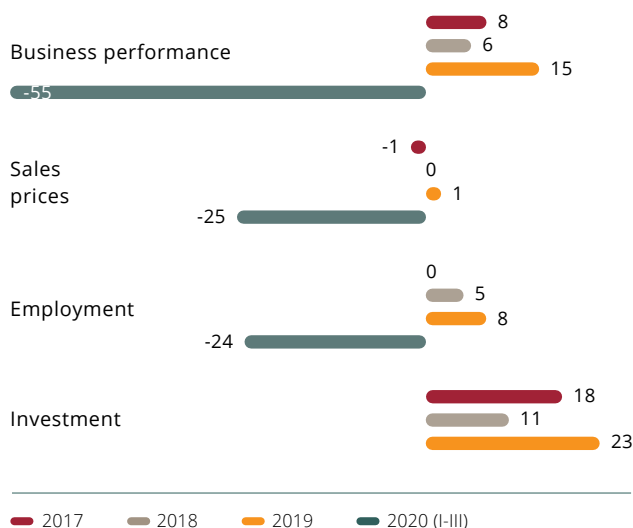
Investment, with figures from 2019, was down 7 percentage points with a balance of 10% following a very positive 2018. It is therefore in an intermediate position in relation to the rest of the sectors.

Construction

As we have already mentioned, according to the Survey, construction was the second worst affected sector in the current crisis, behind hospitality. Having recorded very positive results in 2019, this year saw a deterioration in business performance that was much greater than that experienced in the 2009 crisis (an outcome not observed for sales prices or the number of employees in the sector).

Annual evolution of the main business variables for construction in the AMB

(balances, in %)

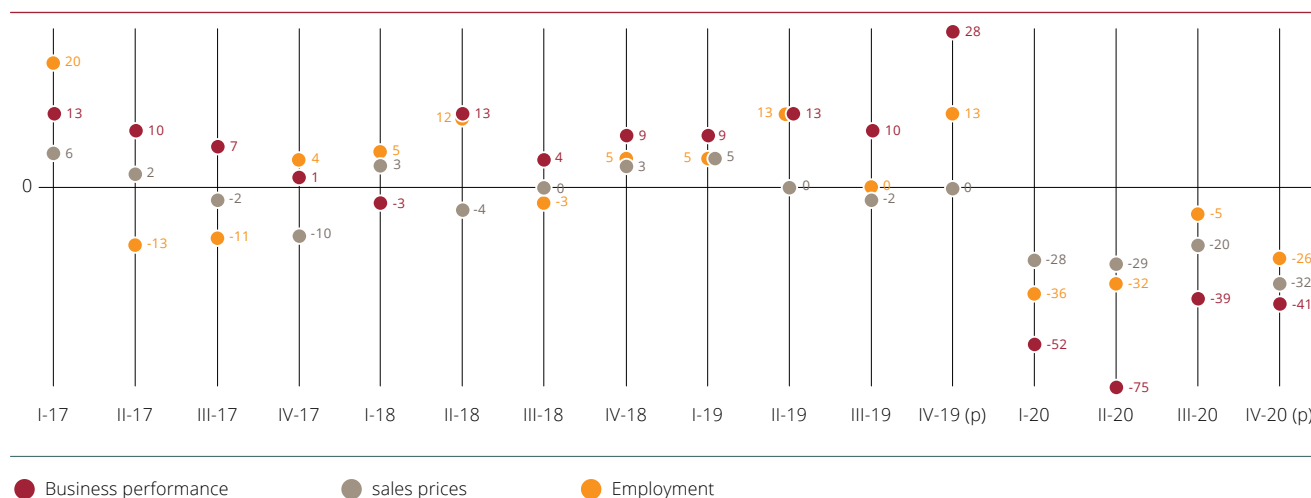


Source: Barcelona Chamber of Commerce and Idescat.

With regard to **business performance**, the first three quarters of the year ended with a balance of -55%, six points above the average. This result is down to the 5% of business owners who said their performance had been positive and the 60% majority who considered it had been negative. If we analyse how the situation evolved in each quarter, we see that this result comes from a rather negative Q1 and a very intense contraction in Q2 due to the lockdown, with the balance for Q3 among the least worst (-39% vs. -52% for the

Quarterly evolution of the main business variables for construction in the AMB

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

economy as a whole). In fact, this is the sector that has shown the best recovery in business performance from Q2 to Q3 (+36 points), ahead of industry and, in third place, other services. This anticipated evolution is in line with what we have observed in other indicators such as cement consumption. In comparison with 2009, the impact of the last crisis was not as great (with a balance of -38% on average for the same period) and more uniform over the course of the year. For Q4 2020, we expect to see a deceleration in the fall in comparison with the preceding months.

As regards **sales prices**, the balances have been particularly negative and very uniform from Q1 to Q3 in 2020, giving an average for the period of -25% (12 percentage points above the total). Despite the impact, it has not been as great as during the crisis in 2009 when the average value for the same months was -33%. Looking to Q4, business owners expect prices to fall even more than the drop forecast for Q2.

Employment in the sector was seriously affected in the first (balance of -36%) and second quarters (-32%) of the year, but the fall slowed down considerably in the third quarter (-5%). This is due to an increase in business owners who said that the number of employees had grown and a notable fall in the percentage that said the number had gone down. In fact, it is the best result among all the sectors for Q3 2020. However, the new restrictions could put a squeeze on this recovery according to forecasts for Q4.

Finally, investment was higher than all other sectors in 2019 and growing with respect to the previous year. The year closed with a balance of 23% (12 points above the overall average), particularly due to the notable increase in business owners who said it had increased, while all other values remained stable. This figure was the highest in the last three years, the only years with positive figures since the last crisis.

Commerce

The **commerce** sector recorded the least negative results, together with industry, despite experiencing sharp falls in the first three quarters of 2020, according to business owners. Compared to the same period in 2009, the fall in business performance and sales prices was not so severe, while employment may have dropped more sharply recently, according to the Survey. Analysing by quarter, overall these results are in line with the Retail Trade Sales Index for Catalonia, which recovered in June from the abrupt fall in April, but which continued to have a negative balance until October in yearly terms.

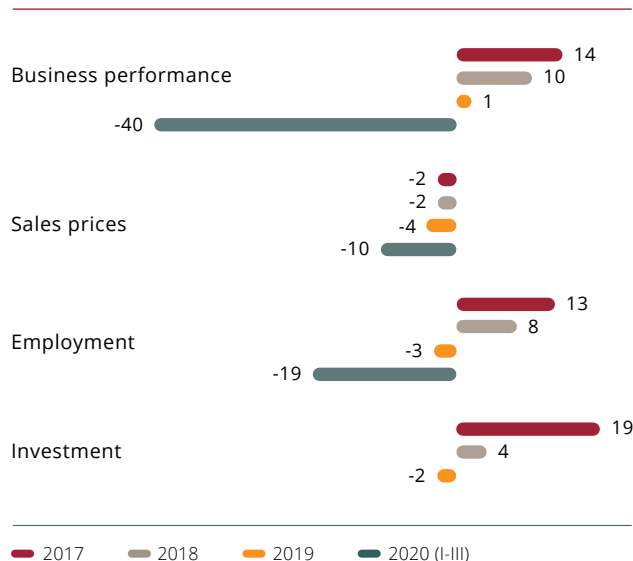
Business performance in the commercial sector in the Barcelona Metropolitan Area fell significantly in the first quarters of the year: with an average balance of -40%, resulting from 15% of responses saying it was up and 55% saying it was down. However, this figure is lower than the overall fall in the economy (-49%). Compared to 2009, the average balance recorded was higher (-55%) with more severe quarterly falls: -70% in Q1 of 2009 compared to -55% in Q2 of 2020. For Q4, business owners in the Barcelona Metropolitan Area expect the situation to remain stable in relation to the previous quarter, despite the uncertainty over how the Christmas campaign will go given the restrictions imposed in December to contain the pandemic.

In 2020, the fall in **sales prices** has been notable but nothing like other worse-hit sectors such as construction and hospitality, and also less intense than the average for the economy. With 5% of business owners considering that prices had increased and 15% saying they had fallen, the balance for the first three quarters was -10%. As with business performance, the 2009 crisis had a greater effect on the fall in prices according to business owners, with a balance of around -20% for the same period.

With regard to **employment**, the pandemic has adversely affected the negative balance already recorded in 2019, which is at -19%. Despite the launch of the ERTA, this fall has been greater than the contraction in 2009 which saw a

Annual evolution of the main business variables for commerce in the AMB

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

Quarterly evolution of the main business variables for commerce in the AMB

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

balance of -14% for the same period, given that the reduction has gone on for longer this time, according to business owners. With regard to the fourth quarter, there has been an improvement in the percentage of those interviewed who think that employment will increase, which slows down the quarter on quarter fall.

For its part, **investment** was down slightly in 2019 for the first time since 2013, with a balance of -2%. Following years of growth in which high figures were achieved, growth was already slowing down considerably in 2018 compared to 2017, finally contracting this last year – a trend which runs counter to the average for the economy, where there was still strong growth.

Hospitality

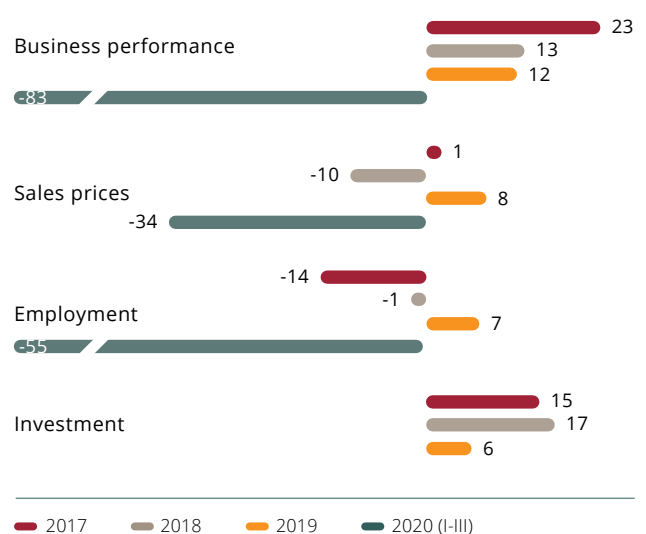
Hospitality was among the sectors worst affected by Covid-19 due to the containment measures, and the worst results were recorded in the Barcelona Metropolitan Area in 2020 (first three quarters) for all the variables analysed. Compared with the same months in 2009, the contraction in business performance, price and labour market was much greater in this latest crisis. This is due to the nature of the crisis and the restrictions that have had to be adopted not only in Catalonia but worldwide, which has reduced foreign tourist numbers to a minimum in the metropolitan area, an economy greatly dependent on the exterior.

So, **business performance** in hospitality has been negative for all businesses with a balance of -83% on average,

reaching -100% in Q2 of 2020 with the lockdown (the worst figure in the historical series). In relation to the last crisis, with a balance of -37% for the same period, and which was -67% in Q4, at no time was there such an abrupt contraction. With regard to Q4 of 2020, the outlook of business owners is equally negative with a balance of -78%, the result of 1% who believe the situation will improve and 79% who say business performance will get worse. However, these expectations imply an improvement in quarterly terms.

Annual evolution of the main business variables for hospitality in the AMB

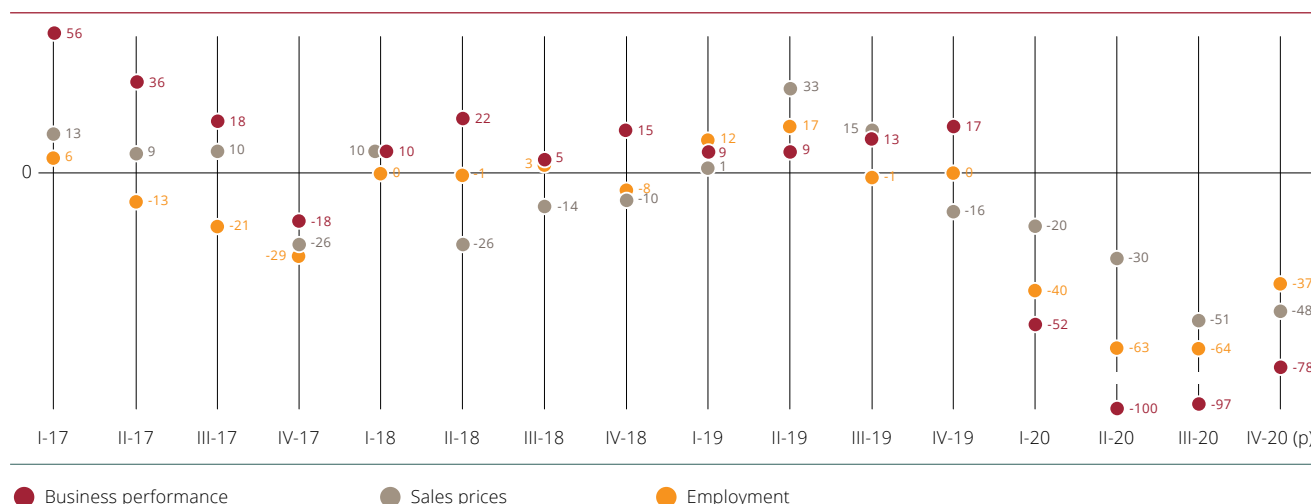
(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

Quarterly evolution of the main business variables for hospitality in the AMB

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

According to business owners, this is the sector that has recorded the biggest decrease in **sales prices** in 2020, with a balance of -34% (almost double the average for the economy). This decrease comes after the increase recorded in 2019 in a context of economic growth. However, it should be noted that this fall is less intense than the one experienced in 2009 with a balance of -41% (from Q1 to Q3 on average). At that time there was a crisis in demand, while currently both supply and demand have been affected which may explain this difference in the way prices have evolved.

With regard to the number of **people employed** in the sector, following the upturn in employment of the previous year, the balance was -55% in 2020, 32 points above the average for the economy and with values exceeding -60% in the second and third quarters of the year. This average balance is more than double that observed for the same period in 2009 (-25%). For the last quarter of the year, the labour market continues to contract and the balance is slightly worse than the prediction for the previous quarter.

In 2019, **investment** in the sector was positive (6%) but much lower than 2018 levels, the average for the metropolitan economy (11%) and lagging behind other activities (except commerce). This result is down to a drop in the number of business owners that say investment had increased.

Other services

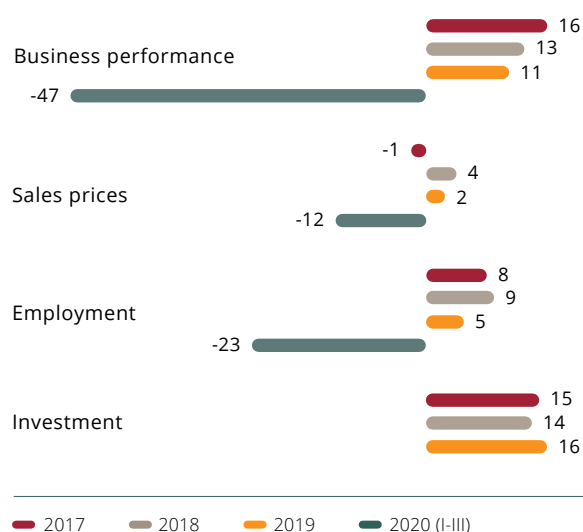
The **other services sector** (services excluding commerce and hospitality) has been hit to a similar extent as the average for the economy both in terms of business performance and prices and employment. So, compared

to the rest of the sectors, it lies somewhere in the middle with regard to prices and employment and, despite considerable figures, has recorded fewer steep drops in business performance. Compared to the impact in 2009, like hospitality, the deterioration in business performance and contraction in employment were greater this year, while deflation was greater in 2009.

With regard to **business performance**, the balance stands at -47%, resulting from 6% of business owners who consider that performance has been positive and 53% who say it

Annual evolution of the main business variables for other services in the AMB

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

Quarterly evolution of the main business variables for other services in the AMB

(balances, in %)



Source: Barcelona Chamber of Commerce and Idescat.

has been negative. This figure is close to the average for the economy (-49%). During the lockdown, the balance stood at around -63%, the worst result in the historical series. Compared to 2009, the average fall for the same period was 14 points lower (-33%). As regards Q4, the majority of business owners say business performance has been negative, giving a balance of -36%. However, compared to the previous three quarters, there has been a slowdown in the lowering of the balance, which has been recovering slightly.

As regards **sales prices**, following two years of increases, these fell in the first three quarters of 2020, recording an average balance of -12%. This value also reached -20% in Q2 and has been very close to the overall drop observed for the economy as a whole (-13%). For the last quarter of the year, a slight decrease in the rate at which prices fall is expected.

In the **labour market**, the pandemic has also had a notable impact with a balance of -23% in 2020 (average from Q1 to Q3), a result of the difference between 7% of business owners who said employment was up and 30% who said it was down. Compared with the rest of the sectors, the decrease lies halfway between construction and commerce with the same drop as recorded for the economy as a whole. For Q4 2020, business owners expect to see a notable drop in the number of employees but not as much as in the previous months.

In last place, **investment** recorded the second best balance in 2019 (16%) only behind construction and 5 points above the average. This was the result of both an increase in business owners who said that it had increased and a reduction in the number who said it had decreased. In fact, this value was the highest for the sector since 2014.

Comparison with Catalonia

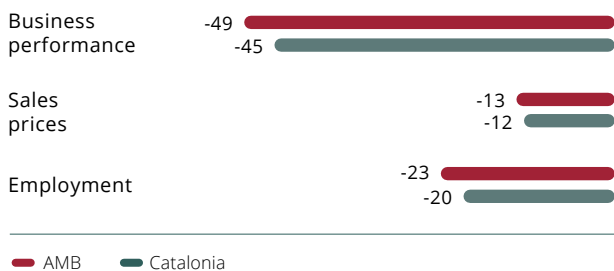
In relation to the way activity has evolved in the territory as a whole, the metropolitan area and Catalonia presented very similar results, albeit slightly more negative in the former for the first quarters of 2020 (with balances of -49% and -45% respectively in business performance). The fall in sales prices and employment were fairly uniform although slightly greater in the metropolitan area. We need to bear in mind the weight of Barcelona in the metropolitan area and its greater dependency on international tourism and exports.

By sector, the fall in **business performance** was greater in the AMB except for commerce, the only sector where the balance was the same. As for **sales prices**, the drop was (moderately) greater in the Principality in the case of industry and other services (with a greater differential). In all other sectors, prices fell more in the metropolitan area, particularly in construction. Finally, only in industry did **employment** experience a sharper fall in Catalonia. In all other sectors, the fall differential between the metropolitan area and the territory as a whole is significant in hospitality (-55% and -46% respectively) while in all other activities, the impact of Covid-19 on the labour market was fairly even, according to business owners.

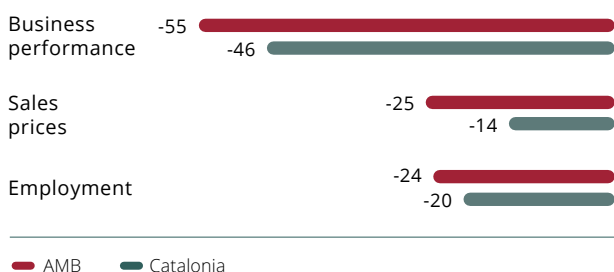
Main business variables with Catalonia. 2020 (IT-IIIT)

(balances, in %)

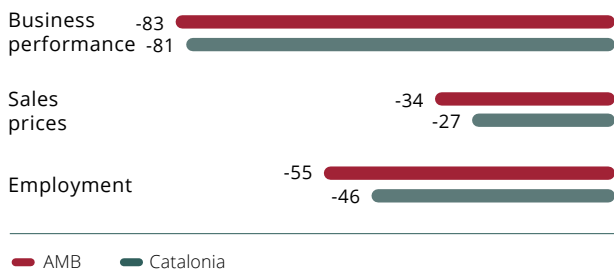
The economy as a whole



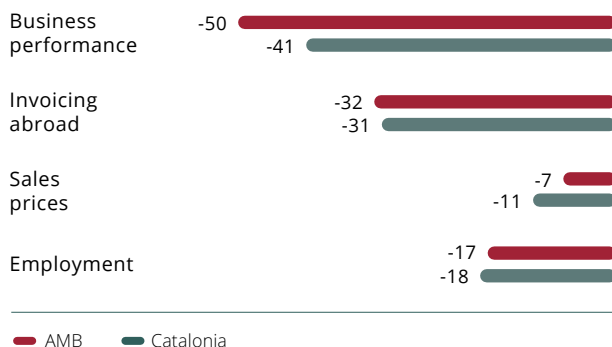
Construction



Hospitality



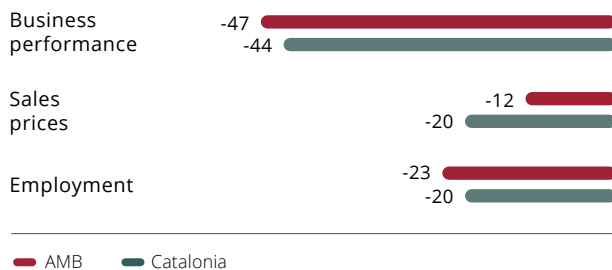
Industry



Commerce



Other services



Source: Barcelona Chamber of Commerce and Idescat.

Methodological annex

Sectors included in the *Business Climate Survey*

Industry

- 01 Food, beverages and tobacco (CCAIE-2009: 10 to 12)
- 02 Textiles, clothes manufacturing, leather and footwear (CCAIE-2009: 13 to 15)
- 03 Wood and cork industries, paper and graphic arts (CCAIE-2009: 16 to 18)
- 04 Chemical industries, rubber and other non-metal mineral products (CCAIE-2009: 20 to 23)
- 05 Metalworking and manufacture of metal products (CCAIE-2009: 24 and 25)
- 06 Production of machinery and mechanical and electrical equipment, and IT, electronic and optical products (CCAIE-2009: 26 to 28)
- 07 Other industries (CCAIE-2009: 05 to 09, 19, 29 to 33, 35 to 39)

Construction

The whole of Section F of the CCAIE-2009, is taken into account:

- 41 Property construction
- 42 Civil engineering construction
- 43 Specialist construction activities

Commerce

- 01 Retail trade in food, beverages and tobacco products in specialist establishments (CCAIE-2009: 472)
- 02 Retail trade in domestic, cultural and recreational products in specialist establishment (CCAIE: 475 and 476)
- 03 Other types of retail trade (CCAIE-2009: 473, 474, 477, 478, 479)
- 04 Retail trade in non-specialist establishment (CCAIE-2009: 471)
- 05 Sale and repair of motor vehicles and motorcycles (CCAIE-2009: 45)
- 06 Wholesale and intermediaries (CCAIE-2009: 46)

Hospitality

- CCAIE-2009: 55 and 56
- 55 Accommodation services
- 56 Food and drink services

Other services

- 01 Information and communications (CCAIE-2009: 58 to 63)
- 02 Legal and accountancy activities (CCAIE-2009: 69)
- 03 R&D, advertising and market studies and scientific and technical activities (CCAIE-2009: 71 a 75)
- 04 Administrative activities and auxiliary services (CCAIE-2009: 77 to 82)
- 05 Other services (CCAIE-2009: 49 to 53, 64 a 66, 68, 92, 93 and 96)

Sampling errors. Àrea Metropolitana de Barcelona 2020*

Sectors	Sample	Error ³
Industry	141	8%
Construction	62	13%
Commerce	174	8%
Hospitality	59	13%
Other services	385	5%
Total	822	3%

* Quarterly average IT-IIIIT.

Source: Barcelona Chamber of Commerce and Idescat (Statistical Institute of Catalonia)

3. Maximum possible error calculated on the basis of a single random sample.

